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NATIONAL ASSOCIATION
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COST ACCOUNTANTS
YEAR BOOK
1941

PROCEEDINGS OF THE
TWENTY-SECOND INTERNATIONAL COST CONFERENCE

The Waldorf-Astoria
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SESSION I

THE DEFENSE PROGRAM
AND
MORE EFFECTIVE ACCOUNTING

TUESDAY MORNING, JUNE 24, 1941

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Boston, Massachusetts, *Chairman*

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MARK S. MASSEL attended New York University, Brookings Institute and Columbia University and is the possessor of the B.S., M.A. and J.D. degrees. Prior to entering Government service he served as Assistant in Economics at New York University, General Manager of a printing plant, and Assistant Chief Auditor of a savings bank. With the Federal Government he has acted as Cost Consultant to the Consumer's Advisory Board of N.R.A., Assistant to Member of National Industrial Recovery Board, Senior Statistician and Consultant for Works Progress Administration, Legal Analyst for Marketing Laws Survey and for the Temporary National Economic Committee, and as Consultant on Costs and Prices for the Department of the Interior. At present, Mr. Massel is Cost Consultant to the Bureau of Research and Statistics of the Office of Production Management. In addition he finds time to serve as Lecturer in economics, law and accounting at the Graduate School of Social Sciences, American University and at the Graduate School of the U. S. Department of Commerce.

WILLIAM M. BECHLER was born and educated in Akron, Ohio, and his entire business career to date has been with The B. F. Goodrich Co. in his native city. Hired by this company for work in the billing department in 1908, he transferred to the factory production office the following year. Here he worked on cost estimating, cost analysis and general production problems until 1915, when he was appointed Manager of a group of manufacturing departments. Three years later Mr. Bechler was assigned the task of centralizing all costing activities for his company and at the end of this assignment was appointed Assistant Factory Auditor. Later he was made Factory Auditor, and in 1927 was appointed Assistant Controller, the position he now holds. Mr. Bechler has been an active member of the Accounting Committee of the Rubber Manufacturers Association and has served as Chairman of various product committees. During 1938 and 1939 he served as Chairman of the General Accounting Committee of the Association.

THE DEFENSE PROGRAM AND MORE EFFECTIVE ACCOUNTING

The opening session at the Twenty-Second International Cost Conference of the National Association of Cost Accountants, held in the Grand Ballroom of the Waldorf-Astoria, New York City, was called to order on Tuesday morning, June 24, 1941, at nine-thirty o'clock, by the President, Victor H. Stempf.

PRESIDENT STEMPF: This marks the formal opening of the Twenty-Second International Cost Conference. In a world gone mad, we give thanks once more that as free men we may meet openly to concentrate our efforts critically and effectively upon the constructive study of industrial accounting problems.

The crescendo of cannon and drums has intensified during this past year. The defense emergency has quickened. Our responsibilities have enlarged in full measure, and today we hesitate to leave our posts. However, reflection convinces us that opportunities such as these do indeed afford the pause that refreshes. The stimulation, perspective and fresh insight to be had from the exchange of views with those in our own field renews our energy and ability to cope with new and perplexing difficulties.

The technical sessions are geared to the new aspects of old problems; the foresight and ability of the Program Committee have assured that. Its members have labored long and diligently. All of them are respected veterans who have served the Association faithfully and well. Each of them personifies that hallmark of N.A.C.A. membership, which veils a wealth of technical wisdom and experience behind an eagerness to learn more and an ardor to enlarge and enrich the treasure of industrial accounting knowledge and literature, which it has been the proud privilege of our Association to foster.

With Nelson L. McCully of Chicago, as Chairman, the Committee includes Arthur C. Chubbuck of Boston, Frank Klein of New York, and Donald M. Russell of Detroit.

It is a pleasure to welcome you to this Twenty-Second International Cost Conference and an honor to present our National Director, Nelson L. McCully, Controller of the Bauer & Black Division of the Kendall Company, the Chairman of the Convention Technical Program Committee.

CHAIRMAN McCULLY: It is proper that my appearance on this program should be brief. The tribute which Mr. Stempf has paid to the Program Committee belongs to the three members of that Committee who have organized the programs and who will act as the chairmen for the individual days of this convention.

The morning sessions for each of the three days are given over to technical papers. The afternoon sessions for today and tomorrow have been broken down into discussion groups. The subjects of both the technical papers and the discussion groups have to do with the current problems of industrial accounting. Many of these problems, as such, are new. Many of the accounting principles on which those problems are based are old. Some of you have had experience with these current problems. Most of us have a great many questions. Please participate freely in these discussion groups; give of your experience and ask the questions that are in your minds.

The Thursday afternoon session is unusual. It is given over to one of the controversial problems of industrial accounting. If you have made reservations to leave this convention before Thursday afternoon, I suggest that you immediately change them and remain here through that session.

These are busy days; the problems which we have are new. The men who are to deliver the technical papers and lead the discussion groups have in every case made personal sacrifices to appear on this program. In giving of their experience on these current problems of industrial accountants, these men have had to prepare the material especially for these meetings. The Association this year has a particular obligation to the men who are taking the time to appear on its program.

The Chairman of today's session is a member and a Past President of the Boston Chapter. You who were at St. Louis last year remember his splendid contribution to that program. He has appeared on other technical programs. It is my pleasure to introduce to you Mr. Arthur C. Chubbuck, Partner, Patterson, Teele & Dennis of Boston, who will act as Chairman today.

CHAIRMAN CHUBBUCK: It has been said of the national defense program that "there is no tomorrow for any nation or any people that is not involved in the success or failure of what we have undertaken to do."

Because of the inconceivable magnitude and present impact of this undertaking, it is eminently appropriate that the first technical address of this convention should be a statement of some of the cost problems which arise from it, thus providing a background for later development of the program.

Because of the key relationship of the Office of Production Management to the defense program, it is also appropriate and reasonable that we should look there for a speaker. Dr. Stacy May, Director of the Bureau of Research and Statistics of the Office of Production Management, accepted our invitation and would have been our first speaker this morning but for a series of business matters which finally proved insurmountable. Fortunately, he has been able to sell one of his own organization the idea of coming here and addressing us, one whom Dr. May suggests speaks our language far more eloquently than he does.

It is with much pleasure that I present Mr. Mark S. Massel, Cost Consultant of the Bureau of Research and Statistics of the Office of Production Management, who will address us on the subject, "Accounting Under the Defense Program: Some General Cost Problems."

ACCOUNTING UNDER THE DEFENSE PROGRAM Some General Cost Problems

MARK S. MASSEL

Cost Consultant, Bureau of Research and Statistics,
Office of Production Management,
Washington, D. C.

A REVIEW of the program for this year's convention of the N.A.C.A. shows that our ways of doing business are undergoing far-reaching changes. Under the impact of a tremendous defense program "business as usual" can no longer be followed. The volume of government orders; the necessity for shifting facilities and

organizations into new fields of production; the establishment of priorities for important materials; the utilization of unusual types of government contracts, such as cost-plus-a-fixed-fee; the need for new capacity, both privately and governmentally financed; the increasing importance of taxes and national budget—all sum up into a need and a new opportunity for the social contributions of American management, in the public interest.

The Cost Accountant and the Defense Program

Your program demonstrates also an increasingly important role for the cost accountant in modern management. The immediate cost problems in government cost-plus contracts, in escalator contracts and in tax amortization constitute the more obvious sectors in this new development. However, it may well be that the cost problems affecting the new business adjustment may present even greater scope for a positive social contribution by the cost accountant. The use of cost analysis should attain new significance in the determinations and adjustments affecting industrial price policy, governmental price-control, priorities and the changing problems of production.

This new opportunity for the profession of cost accounting expresses itself in many ways. The several general uses of cost accountants' services are well-known. Government today has a more pressing need for the direct services of cost accountants than at any previous time. Meanwhile, private companies require their help more than ever in business planning, and in government negotiations and settlements. Prices in defense contracts will have to be more strongly related to cost than to market demands. This may give new importance to cost estimating, making it a more significant factor in price policy than it has been. All of these functions have led to new requirements for an expansion of the profession. The English experience, especially the classification of cost accounting as a deferred occupation under the draft laws, indicates that the importance of the profession will increase considerably as the defense program advances.

The Cost Accountant as Adviser

The significance of these services can hardly be over-estimated. However, this paper is based upon the probability that post-war opinion will regard as the chief social contribution of the profession,

its indirect help—advising on the formulation of basic policy, both governmental and private. The present scene offers an unequalled opportunity for the cost accountant to serve as an adviser and interpreter. He can help government by demonstrating the management problems which industry faces; by presenting impartial information on costs and cost structures; and by advising on the most efficient and effective procurement policies. He can help industry by explaining new governmental regulations; by expediting the process of selling to the government under unusual contract terms; and by implementing a program of industrial self-enlightenment which may become one of the most strategic factors in our entire program.

With the foregoing possibilities in mind this paper presents a series of problems arising out of cost accounting and relating to procurement, price and production policy. The answers will not be discovered easily. They will depend on experience and on new fields of analysis. But they must be developed if our defense program is to be successful, and if the post-war reconstruction period is to be protected against the catastrophic economic conditions which follow modern warfare.

Need for Change in Viewpoint

New techniques must be devised for combining analyses of costs to the private company and costs to the general economy. Practices which we enjoyed as peace time luxuries—even as necessities—must be modified if they remove too many resources from the requirements of the defense program in terms of man-power, materials, productive capacity and managerial ability. For example, cost analyses of the trimmings and other purely style factors in automobiles can no longer be restricted to the calculation of dollar outlay. They must take into account the alternative uses of the necessary materials, the required machine tools and the industrial plant. They must be set so that we do not face the harsh choice between more armaments and the bare, minimum needs of the civilian population. Although it may not be possible to produce more guns and more butter, it is essential to utilize the resources left for civilian consumption more efficiently. If we can develop methods for producing more utilitarian consumers' goods with less effort, there will be more consumers' goods to go around.

In these terms it is necessary for the cost accountant to escape the

confines of private profit in his business analysis and to expand his horizon to the outlines of a national program. He can no longer limit himself to the conventional accounting for dollar costs, but must look for alternative methods which will tell government and industry how to produce the tremendous quantities of defense goods with the least dislocation. Business procedures which may have been profitable in the past must be modified if they conflict with the objectives of the defense program. Thus, if a company has enhanced its profits in the past by keeping inventories of necessary materials and machines off the market, or even by purchasing such materials for future use to avoid later shortages, it must discontinue the practice. If a manufacturer built up a past profit position by making his product distinctive in style and national economy calls for simplification of styles, he must help the standardization program in order to reduce costs. With the same point of view he must re-examine his past expenses to see what can be curtailed in order to release as many resources as possible.

The central problem presented here focuses on government procurement and industrial attitudes toward sales to the government. However, it contains broader implications relating to the whole range of business decisions. These stem from the fact that the defense program, which according to some estimates should reach as much as 40 billion dollars per year, will comprise a major segment of our economic activity. Therefore, the prices to the government will affect the entire industrial price structure; defense production will influence the total productive picture; and the factors influencing the costs of doing government work will flow into the cost structures of our entire productive establishment.

The Problem of Risk-Taking

In developing government policy covering contract prices, considerable attention has been devoted to cost either through a direct cost section in the contract or in utilizing cost information to gauge the reasonableness of price terms. Because of the scale of the program and the changed business situation, these cost approaches are peculiarly affected by one hitherto neglected cost factor—the problem of risk-taking. Who should take the risk of constructing new facilities? Who should bear the risk of changes in the factors

affecting costs? Who should take a chance on losing part of his market position in order to take a government order; and the converse, who should hazard losing his market position and his general business organization by not taking government orders?

In some cases the insurance value of the risk may be estimated into costs; some of the ordinary hazards of doing business are involved; some risks are so great that only the general economy acting through the government can take them; and many potential uncertainties may be reduced, and even eliminated, by a sensible program of government procurement. Since these problems ultimately relate to costs, the cost accountant can make a positive contribution by aiding government and business in determining how the costs of risk may be reduced or even eliminated. That is, he can help to determine which procurement and production policies will minimize social risk and which charges for risk may be eliminated. To illustrate the range in the field, several procurement problems are discussed here under the following headings: supply contracts, new facilities and equipment, the selection of contractors, and the acceleration of production.

Supply Contracts

The major types of supply contracts are lump sum, fixed price subject to escalator provisions, and cost-plus-fixed-fee. Each involves a different schedule of risks for the government and for the contractor.

Under a lump-sum contract, the contractor agrees to sell at a set price and assumes all the risk relating to increased costs. Wage rates and materials prices, which may respond to forces outside of his immediate control, will depend to some extent on governmental policy. He can control some elements, namely material costs, by forward buying or through increasing inventories, subject to the administration of priorities. In the main, the large body of costs will also be dependent upon his own efficiency and his own estimates of the production outlook. Thus, if he expects rising costs and sufficient future orders and material supplies, he may make a cost saving by accelerating production. His increased production per month may effectuate savings in overhead burden which will more than offset increased out-of-pocket costs. Such a procedure would profitably increase production to meet our present needs.

Escalator Provisions

An "escalator contract" removes some of the risks assumed by a contractor in a fixed-price contract by placing them on the government, and may reduce the contractor's premium for risk. The prices under such contracts are subject to adjustment for changes in wage rates and material prices. Although some few escalator clauses are based upon the prices and wages paid by the contractor, the usual clause applies broader indexes which protect the contractor against changes in the general price levels. Certain escalator provisions may be calculated to influence the contractor to accelerate the purchase of materials or physical production in order to restrain cost increases in a rising market. For example, the use of a "quota" system by which material costs are adjusted on the basis of prices during the first few months after the date of the contract will influence the contractor to place early material orders. Such a procedure requires careful analysis of the effect on market prices and supply. Otherwise, if many contractors were to rush their orders in at the same time instead of waiting until the goods were needed, there might be a considerable drain on the current supply of raw materials and parts. This might even keep materials from some who needed them immediately.

However, the escalator clause does not remove all the contractor's uncertainties. Still to be reckoned with are the variations between the wage rates and material prices paid and the indexes used; the efficiency in use of materials, labor and machinery; the volume factors affecting unit overhead burden; and the future outlook for orders and materials. The government accepts the risks of change in price levels—over which it may have more control than the individual contractor—and the possibility that the indexes may move higher than the contractor's costs. In return it may or may not gain the elimination of part of the contractor's premium for the chances taken in a fixed-price contract. It should be remembered that an escalator clause does not afford cost protection. It takes into account changes in the prices paid for labor and materials as they may be reflected in the indexes which are used. Indexes may apply to changes in a narrow industrial field in which the contractor operates or in a wider range of industry. For example, they may apply to airplane construction or to the manufacture of all durable goods. The relationship between changes in the index and changes in rates

and prices paid by the contractor will determine how closely the price adjustment approximates changes in his out-of-pocket costs.

Cost-Plus-Fixed-Fee Contracts

The contractor's risks are decreased greatly under cost-plus-fixed-fee contracts since the government assumes the burden of certain definable costs through reimbursement and pays a fee to cover other elements and profits. The prices and wages paid by the contractor are charged to the government; manufacturing overhead is included; and the contractor's efficiency factor is reflected. His risks, however, are not eliminated entirely. He may, under a short-sighted policy, permit efficiency to decline; this would tend to increase the costs of his other and future operations. Again, knowing that the government will pay all the bills, he may not be too concerned about total costs, and may believe it more profitable to order all necessary materials at once, to have them on hand. Following this line, the contractor, together with others who share his views, may force prices up and keep materials from the producers who really need them. He still takes the chance of not having enough production for optimum utilization of the plant at a later time.

On the other hand, the government takes several risks: changes in wage-rates, overtime bonuses and material prices, decreased efficiency, and padded costs which may not be discovered because of unjustified expenses and cost allocations. Furthermore, if a contractor is not sure he will have new orders and materials after the current orders are filled, he may be inclined to slow down his production. If he keeps a productive department in his plant occupied for six months instead of four he may charge 50 per cent instead of $33\frac{1}{3}$ per cent of a burden center's annual overhead, to the government contract. This may tend to decelerate production, reducing the potential output with given supplies of materials, labor and capacity.

Several types of risks may be eliminated through "target" price contracts, which is a cost-plus type with adjustable fees. If the cost is lower than the original estimate the contractor gets a percentage of the savings as a bonus; if they are higher the fee is reduced by a percentage of the additional cost. Minimum and maximum fees are usually provided. Under this type the contractor gets the same *cost* protection, though his fee is variable, while the government gets an efficiency protection in prices paid and in factory management. However, if the original cost estimate is too high, the initial fee,

set in relation to estimated costs, will be unduly large and the bonus for savings will be increased unnecessarily.

Allowable Costs

The problem of agreeing upon allowable costs has not been easily resolved. In a number of instances, conflicts have developed or are about to become evident because of misunderstandings on the part of contractors. Several simple factors will serve to clear the air and avoid such misinterpretation. First, it is important to recognize that the burden of proof in establishing costs, for any purpose, must fall on the contractor. Because of his access to pertinent information and more intimate knowledge of his own business, it seems only fair that the contractor should prove, beyond a shadow of a doubt, that his cost estimates are reliable. Second, it would be helpful if the contractor realized that the government purchasing and auditing staffs, which themselves include men with extensive industrial backgrounds, are making and checking cost estimates as any efficient business organization would. They definitely disagree with the attitude that government orders should be exceptionally lucrative, just as they do not believe that large operating losses should be taken.

Unfortunately several contractors have exhibited some tendency to regard government contracts as legitimate opportunities to puff up costs in order to provide a comfortable cushion. Because of the action of a very small proportion of contractors, we may look forward to a considerable tightening of the accounting rules and definitions, as well as the audit procedures, covering cost determinations under such contracts. In addition, there is a strong movement towards more rigorous scrutiny of cost data submitted for any price purpose, whether for cost-plus or other types of contracts. These developments do not imply lack of faith. They are based upon a simple recognition of the fact that the most effective regulation and the most desirable contracts are based upon complete understanding.

Facilities and Equipment

Because of a curious provision in the Second Revenue Act of 1940, dealing with special amortization of necessary plant and equipment, the risk patterns in the capital investment for plant and equipment are partly dependent on the tax position of the contractor. Since one of your later sessions will deal with this problem, the present discussion will not include the tax aspects.

New facilities may be provided under five methods: (1) private financing by the contractors; (2) government financing through an Emergency Plant Facilities Contract with the War or Navy Departments; (3) government ownership with a real or nominal rental through a Defense Plant Corporation Contract; (4) government ownership with supplementary management contracts, as in the case of a powder plant; (5) government purchasing of manufacturing equipment through a provision in a supplies contract which includes the use of the equipment.

Under private financing, even though the loan may be made by R.F.C., the contractor takes the entire risk of the plant. It may or may not be fully used during the defense program; its utilization after the end of the program is unknown; both insurable and residual risks due to physical damage remain with the contractor.

Government-Financed Facilities Contracts

Under the various government-financed facilities contracts, all residual risks which cannot be insured are in the government's hands. In the cases of defense plant corporation contracts and government-owned facilities, the Federal agency pays the cost of the plant, takes title and assumes non-insurable risk. Under emergency plant facilities contracts, the Department agrees to pay for the plant in sixty monthly payments after which it will take title. The contractor may assign the monthly payments, free of offsetting claims by the government, and the government pays for non-insurable damage. Although legal title remains with the contractor until full payment is made, the beneficial title and risk are really in the hands of the government.

Both defense plant corporation and emergency plant facilities contracts give the contractor a firm option to purchase the plant at a price calculated by depreciating the original cost at liberal rates. In this way, the contractor may purchase the plant at a reasonable price if it appears to be a profitable venture in the future.

These contracts provide, in effect, that the risk of capital investment, which may prove worthless after the emergency, shall be borne by the economy rather than by the contractor. They may serve also, especially in the case of the defense plant corporation contract, to eliminate the possibility that the contractor will not be allowed to take tax amortization because the prices in his supply contracts include amortization.

An interesting cost-price sidelight is presented by these facilities contracts. The prices charged for government supplies produced in privately-financed facilities will include some form of depreciation or amortization. On the other hand, the real price paid for goods produced in the government-financed plant is composed of two elements: depreciation and related facilities costs are contained in the payment for the plant, while other costs are represented in the payment for the supplies. Therefore, the formal prices for supplies produced in this type of plant will not be as high as they would be if they were made in a private plant especially constructed for the purpose. Since prices in the general market are affected by what the government pays, the exclusion of heavy charges for plant and equipment from defense supplies prices will remove a strong influence for price inflation.

Selection of Contractors

On many occasions there is little choice in the selection of the individual contractors for defense production. In the production of many items, the number of companies and the total available capacity is limited. However, in those cases where a choice can be made from a group of manufacturers there are many cost criteria which would affect the decision. In a similar fashion such factors have a bearing on the alternatives of spreading the orders among more contractors or concentrating them.

In the production of some items, a small group of manufacturers may be able to take care of the total government requirement at lower costs than others. In other cases, there may be a saving in using many small manufacturers. These relative cost patterns depend on several factors. In many instances, lower costs to the individual contractor represent lower cost to the economy through greater efficiency because of such advantages as better location relative to raw materials and component parts, more efficient machinery, larger supply of skilled labor, better factory management and great utilization of available capacity. In some cases, cost advantages depend upon factors which are related not to efficiency but to past capitalizations, idle and non-productive property, and liabilities in the financial structure. These differences are of great importance in using cost information during a defense program. Explaining them and fostering more intelligent decisions should be one of the tasks of the cost accountant.

Risks in Taking or Not Taking Government Contracts

From the individual manufacturer's point of view there are various risks incurred in taking government orders which displace regular civilian business. The individual may feel that he is in danger of losing his long-run position in the market, or that he must keep a skeleton sales force which is not needed for government orders in order to retain his position. In more general terms, he may believe that the value of his future potential profits is too large to take the risk involved in a large volume of government business.

However, in such analysis the contractor may lose sight of the fact that his immediate profit situation and his long-run market position may suffer if he does not take the defense orders. It may become virtually impossible to operate plants in some industries without government orders. A comprehensive priorities administration may effect sharp curtailments in materials, tools and equipment available for certain civilian production at the same time that certain civilian purchases decline. As a result, the manufacturer may find that he is using such a small part of his plant capacity for civilian orders that he would incur large operating losses even if the prices for the civilian goods should increase.

Clearly, a well-designed procurement program can reduce some of these relative risks so that more defense production can be maintained, at lower costs and prices, and with less dislocation of industry. In some instances it may be desirable to spread orders among all available capacity in order to curtail the risk of losing individual positions in the market. Thus, with everyone taking a proportionate share, relative competitive positions would be unchanged. In other cases, however, the relative efficiency of concentrated production may far outweigh the relative risks.

In this type of problem as in the others, cost accountants are afforded a great opportunity for a public contribution. Cost analyses and interpretations which clarify the problem for the individual manufacturer and for the government procurement agencies would facilitate greater defense production with lower social costs.

Accelerating and Increasing Production

The problem of accelerating and increasing our present defense production is closely related to the selection of contractors. Because of the general pattern of progress to date it is evident that production

must be stepped up. Such a policy may require adjustments in past contracts and will certainly call for additional orders.

The choice between arranging for acceleration in the fulfillment of present contracts or superimposing new orders on old ones depends, in part, upon some definable risk elements. Suppose that a manufacturer has an ordnance order with a final delivery date six months from now. If he is asked to complete that same production in four months, he may be faced with additional out-of-pocket costs in the form of overtime bonuses, higher machinery repairs, more spoilage, bonuses for early delivery of materials, and even small additions to equipment. On the other hand, if he estimates job costs on a monthly basis, he may show substantial offsetting savings in unit overhead cost due to the greater volume. Such a cost pattern might enable him to accelerate production at little or no extra unit cost.

However, he may believe that if he compresses six months of production into four fast months, they might be followed by two famine months. In that event he may feel that the full six months' overhead for the department in question should be charged to the order and produce the same estimates for unit burden. Translated into risk terms he may require a cost bonus because he cannot see what production the future holds in store for him.

On the other hand, an additional order with delivery dates superimposed on the old ones may change his cost position radically. First, the increased daily production will reduce unit overhead burden. Second, the order may be large enough to add shifts and expand departments which constitute production bottlenecks. In this way unit out-of-pocket costs may be kept constant or even reduced. In other words, he might be willing to take the additional orders at lower unit prices and produce an increased amount during the first four months. This may be preferred to collecting a bonus for accelerating delivery dates. Since most acceleration programs would be based upon a need for additional supplies, such a procedure may eliminate certain business risks with no charge to the economy.

The period of time during which the additional production would be scheduled would bear a direct relationship to the problem of risk discussed under the supply contracts. Contracts for deliveries over long periods involve some forecasting of future prices for materials, services, financing and equipment, and of future wage rates. As discussed above, this type of risk can be curtailed through enlightened self-interest, preventing upward spirals of prices and costs.

Cost Accountant's Part in Program of Acceleration

In the development of a program of acceleration, as in the other problems discussed, the cost accountant's contribution can focus upon advising the businessman and the government on methods for reducing the risks, lowering costs and increasing efficiency. In the type of situation outlined above his analysis of the alternative costs and prices under supplementary agreements for acceleration and for increasing production may be the keystone to the solution of the difficulty.

In general, the types of factors discussed here are only illustrative of a large body of unsolved problems. The cost accountant, because of his intimate knowledge of the behavior of costs, may expedite the development of our entire defense program by suggesting general solutions and by helping the affected parties to resolve the individual procurement situations. At a time when risk is one of the most important elements in national planning, he is in a peculiarly good position to develop new improved ways to reduce the hazards and their costs. Through an understanding of the procurement program and of the various types of contracts used, he can promote an understanding between government and contractors which would take care of half the job. Will he accept the challenge?

CHAIRMAN CHUBBUCK: Thank you, Mr. Massel, for a very clear statement of some of the problems which the national defense program offers to us.

Mr. Massel has provided an excellent background for our second subject. He has stated well certain of the cost problems which arise as a result of that huge program on which we are embarked. The second speaker is going to take another phase of the same situation. He is going to tell us how we can equip ourselves and organize to solve some of the problems about which Mr. Massel has told us.

Our second speaker is from industry, as you might guess. He is Assistant Controller of The B. F. Goodrich Company of Akron, Ohio. Mr. William M. Bechler, it gives me great pleasure to introduce you at this time to your audience.

MORE EFFECTIVE AND ECONOMICAL INDUSTRIAL ACCOUNTING AND CONTROL

WILLIAM M. BECHLER

Assistant Controller, The B. F. Goodrich Co.
Akron, Ohio

AS I look around this room, I recognize many men who have contributed in no small way to the development, the advancement and the acceptance of cost accounting, which in its accepted definition includes forecasts, budgetary controls and standard costs. Many of you will recall quite vividly the years we spent counselling with one another as to the real purpose and meaning of standards and cost controls, how to prepare and how to present them, and also how we worked side by side in our honest and sincere efforts to convince management that we had something they could use. The majority of us have gone through the same painful, slow progress of finding a practical cost accounting method for our companies, centralizing costing effort and developing methods for compiling forecasts, budgets and standards. We have made progress and while each accountant continues to be faced with the problem of how *best* to prepare for his respective company pertinent and useful figures *at the lowest possible cost and with reasonable promptness*, we have progressed to the point where we are ready to review the reports management has accepted as essential controls and at the same time—seriously and with open minds—challenge ourselves and our methods.

I am assuming that we learned a long time ago that costs are not “cures,” but are diagnoses. I am assuming, also, that we are not attempting to make cost accounting a substitute for management. It is a servant of management and can never be anything else. It bears repeating, however, that it is a most efficient servant of, and an indispensable aid to, management.

Challenge

The challenge is therefore this: Are we giving management too many figures and not enough useful tools to properly regulate and guide our respective companies into profitable operations—not only

in these days of volume production, but also through those months of declining volume which are so sure to overtake us?

You are interested in facts, not theory. I propose, therefore, to outline to you the various major reports and controls now prepared for the management of The B. F. Goodrich Company and to point out the things which we have done and are now doing to minimize and control accounting expense, all in the hope that they may challenge our thinking and provoke sufficient discussion to make this meeting worthwhile.

In my opinion, the type and scope of—and the necessity for—reports depend to a large extent upon such factors as the type and size of the particular business; the variety of products manufactured and sold; and the management setup. With this in mind, I will outline, very briefly, the general plant and management plan of The B. F. Goodrich Company.

The Company

We are a New York corporation with our main factory, research laboratories and general offices located in Akron, Ohio. The office of the Chairman of the Board is in New York City. We have branch rubber goods manufacturing plants in four cities of the United States. We operate our own rubber reclaiming plant and our own cotton mill. The Hood Rubber Company of Watertown, Mass., is a wholly owned subsidiary. Likewise, we have subsidiary companies in Kitchener, Ontario, Canada, and Colombes (near Paris), France. We do not own or operate a rubber plantation, but we do have a rubber buying office in the Far East.

Our products, except as limited by the present War, are sold throughout the world. In the United States we have branch sales offices and/or retail stores in approximately six hundred locations. We manufacture approximately 30,000 different rubber articles, a large number of which are special—tailor made—to customers' specifications.

Our Board of Directors consists of sixteen men, five of whom are executive officers of the Company. Board meetings are held once each month here in New York City. The Board of Directors elects from their number an Executive Committee of six members, two of whom (the Chairman of the Board and the President of the Company) are active executive officers. The Executive Committee meets once each week in this city.

Management

An Operating, or Officers' Committee, consisting of the President, Treasurer, Secretary, *Controller*, and Vice Presidents in Charge of Finance, Sales and Manufacturing, meets at least once each week. All members of this Committee are located at Akron.

I repeat that in my opinion the form of management as well as the size of the company will be found to dictate to a large extent the number and types of reports required.

The B. F. Goodrich Company operates under an accepted standard cost plan and has a budgetary expense control system. We compile forecasts of sales, production and earnings. In a measure at least, we operate under the plan or principle of exceptions. Actual costs are compared with standards, expenses with budgets, and sales and earnings with prior period figures and with forecasts. A major interest in the controller's office is the proper presentation of variances.

Sales and Earnings Forecast

The most important and useful report prepared for our management is the Sales and Earnings Forecast. In the background it includes the sales forecast down to individual commodities and an expense budget for each individual operating, production and sales department, district and branch. As necessary and essential corollaries, there are the cash budget, purchasing budget and budgets for repairs and maintenance, capital expenditures and advertising. Each of these budgets is approved by the Operating Committee. The latter two—capital expenditures and advertising—are also approved by the Executive Committee. The budget supervisor reports to the controller's office.

Forecasts to the end of the fiscal year are revised any time a major change is encountered, such as a revision in the price of finished goods, a change in labor base rates, or wide fluctuations from forecast in the price of major raw materials. However, we continually tie back to the original or "official" forecast and note exceptions. Sales and production forecasts are reviewed, and if necessary revised monthly, particularly for the benefit of the monthly cash and purchasing budgets, and for scheduling raw material releases from suppliers.

Orders Booked

The second group of reports in rank of importance is the daily record of orders booked. These figures are summarized weekly by

major commodity divisions of our business and compared with sales quotas. Obviously, these are invaluable devices for near-term planning.

Profit and Loss and Balance Sheet

The third group of reports in rank of importance includes—

- (a) Profit and Loss Statement for the current month and period to date.
- (b) Monthly Balance Sheet.
- (c) Surplus Account.

The Corporation's consolidated sales and earnings figures for the current month and the year to date are available to all executive officers, including members of the Executive Committee, on the tenth working day after the close of the month. They are submitted to the Board of Directors at their monthly meeting. Variances from standards and quotas are indicated as footnotes on these statements.

Within two days after submitting the Consolidated Net Sales and Earnings statement, we present profit and loss statements segregated by major divisions of our business. At this time there is available a more detailed analysis of net sales, deductions from sales, cost of sales (standard and variance), gross profit, commercial expense, and operating profit. Summary figures are furnished to members of the Operating and Executive Committees, but not to every member of the Board. Individual statements in detail are furnished to division heads. These figures are compared monthly with the prior year, and quarterly with the "official" forecast and prior year's operating results. We follow these major division statements with Commodity and Method of Sale Profit and Loss statements. Summaries are furnished the Chairman of the Board, the President, and the specific vice president interested. Detailed statements are furnished to interested division heads only.

In the Retail Division, monthly profit and loss statements are compiled for each store and each district or group of stores by centralized district accounting organizations and are available to store managers between the fifth and the eighth of the month. Summaries are available for the executives not later than the ninth working day each month. Profit and loss statements for each sales district are compiled for quarterly and yearly periods only. Each statement, or group of statements, is accompanied by a covering note prepared in the controller's office which points out only pertinent facts with specific reference to variances from quotas and standards.

Sales Quotas

Sales quotas are established at the beginning of the year for each salesman, each store and each district. Attainment records are compiled monthly. Incidentally, we have not hesitated to change sales quotas—either upward or downward—during the year, if in our judgment general business conditions justified a change.

The district manager and home office product sales manager receive the detail of quota attainment figures. For example, their statements indicate whether the particular salesman sold his quota of first-line tires compared with second-line tires; or, in the Mechanical Goods Division whether he has sold his quota of belting compared with hose. The general sales managers and the vice president in charge of the respective sales division regularly review the attainments by districts only, while the President of the Company reviews only the attainment for the division as a whole. Obviously, any of these men can call for detail at any time they see fit.

Summary comparison of sales and quotas—segregated by major divisions—covering the month and the year to date are presented to division heads, to members of the Operating Committee and to the Chairman of the Board once each month.

The very fact that this information receives such wide distribution has a stimulating effect upon the entire sales organization and aids materially in securing intelligently set quotas at the beginning of each year.

Billed Sales Report

We also compile a daily summary of billed sales, comparing current figures with the corresponding periods of prior month and the same month last year. These summaries are furnished management on the tenth, fifteenth and twentieth of the month and each day thereafter until the end of the month.

Production Reports

The production reports furnished top management are quite simple. Unless there is a major deviation during the month from the daily rate set up in the monthly forecast, there is no interim report made to top management. If there is a major breakdown, or stoppage of work from any other cause, naturally they learn about it immediately and no report is necessary. In such event, we merely report the

estimated amount of production lost and indicate whether or not it will be made up—with overtime.

Industry Comparisons

Fully 90 per cent of the rubber manufacturing companies report their sales to the office of the Rubber Manufacturers Association. In the Tire Division this report covers both units and dollars. In other divisions it is limited to dollars.

The monthly unit tire report is segregated between sales to car manufacturers and all other sales. The accounting division prepares comparisons of Goodrich sales with all industry reports. Both the Operating and Executive Committees, as well as the specific division heads, are furnished with summaries of these figures. Quarterly, the Rubber Manufacturers Association office compiles unit industry tire sales by size and type of tire. Our comparisons with these figures are used by departmental heads only. They are not submitted to executive officers but, of course, are available for their review if they call for them.

Operating Expense Statements

Each home office operating manager and each branch and store manager is furnished with a monthly statement comparing actual and budgeted expense, both for the month and for the accumulative period of the year to date. These statements are in detail and show amount of overrun or underrun opposite each item of expense.

Division heads, such as general superintendents, general sales managers, district managers, etc., are furnished with the totals only for each department, branch, etc., with a brief note pointing out the field in which any overrun occurred. The executive officer in charge of the specific division is furnished with summaries of these statements.

The president, financial vice president and controller are furnished with a monthly summary of operating expense variances. This summary emphasizes the *exceptions* only. It is used extensively and effectively in Officers' Committee deliberations and is the executive tool for controlling operating departments' expenses.

Production Cost Statements

Departmental production costs are compared with standards monthly and are not only controlled as to major elements of cost, such as material, waste, labor and overhead, but all variable and semi-

variable overhead accounts are measured according to standards computed after the month's production figures are available, in order that we may give proper weight to volume.

Approximately 90 per cent of our production employees are compensated under an incentive wage plan. Direct labor effectiveness is a factor in determining supervision's bonus. There is, therefore, a temptation to pad production figures which makes it imperative, if irregularities are to be exposed, that our costing standards be accurate; that labor summaries be compiled in quite some detail; that semi-processed units be compared currently from one process to another; and completed units carefully checked into finished goods controls.

The general foreman, a production staff representative, and a member of the controller's division jointly review the detailed monthly production cost statements comparing standards with actual, and discuss the causes for variances, if any. Summaries of departmental variances for material, waste, labor and overhead are furnished divisional superintendents. Divisional summaries are furnished the vice president in charge of production. No copies of these statements are furnished members of the Operating Committee or the president of the Company; all variances from standards are shown as separate items in the cost of sales group in profit and loss statements, but the controller's office accepts as its responsibility the duty of calling top management's attention to unusual variances and to items of special interest.

Executive Authorizations

We have the usual setup requiring executive authorizations for capital expenditures and items of unusual expense in excess of \$250. Amounts above \$250 and less than \$1,000 can be approved by the executive officer in charge of that particular division. Amounts above \$1,000 and less than \$10,000 require the approval of the Operating Committee, and expenditures for \$10,000 and more, the approval of the Executive Committee. A weekly report is submitted to the Executive Committee of executive authorizations in excess of \$1,000, approved by the Operating Committee. A quarterly report is submitted to the Operating Committee listing approved executive authorizations in amounts less than \$1,000.

In preparing all executive authorizations, and especially those for amounts in excess of \$1,000, we show, wherever applicable, the

additional capacity provided and the estimated sales value of the additional volume. Also, there is listed the estimated financial gain and/or the additional contemplated profit, if any, from the expenditure. This is a most important section of our request for executive authorization and is carefully followed up by the accounting organization to determine whether contemplated savings are realized. A report listing estimated savings and realized savings for each executive authorization is submitted quarterly to both the Operating and Executive Committees. This information is not required with the thought of simply making it tough for the engineers and production men, as they at times are inclined to think, nor should it be interpreted as an indirect method for limiting initiative. It is required as a sound business procedure to insure *real* progress and to prevent, if possible, unwarranted expansion of facilities and unwise use of stockholders' monies.

Purchasing Council

The Purchasing Council consists of the president, *controller*, director of purchases and the head of our commercial research organization. Meetings are held regularly once each week—more often if deemed advisable. A buyer acts as secretary. This committee outlines the general purchase and inventory policy and indicates quantities of materials to be purchased—the latter expressed in terms of months coverage desired. Coverage is computed from an estimate of six months' forward consumption as distinguished from current or past consumption. Summary minutes of these meetings are furnished to each member of the Purchasing Council, to the accounting department, and to each officer of the Company. Monthly the accounting department presents a statement to the Purchasing Council and to members of the Operating Committee comparing actual purchases, consumption, coverage and inventory figures with policies as previously outlined. A copy of this report goes to the Executive Committee. This deals with major raw materials and finished goods only.

Controls

The foregoing outlines the major regular reports furnished top management. Now let us review what we are doing to control reports and expenses, especially accounting expenses.

During the past several years we have more than ever before

concentrated our efforts toward the development of practical and economical plans for more effectively controlling expenses at their source.

Mechanical Accounting Devices

We have adapted tabulator, peg board and accounting machine methods to sales analysis, payroll and labor distribution, engineering and maintenance costs, and in certain instances—we are still expanding these applications—to production planning. This means their use in costing both production and sales and, more important, having original and basic data available in such form as can be most readily used for all reports and analyses. I cannot emphasize the latter too strongly.

Factory and Commercial Bonus Plans

Bonus plans for factory supervision tie in with labor efficiency, waste and overhead expense controls. This has required weekly and, in certain instances, daily reports, and in turn has brought about a wider and far more intelligent use of accounting figures by factory foremen and supervisors. It definitely has reduced factory expenses and has eliminated to a large extent, month-end cost analyses formerly used primarily as alibis.

In the several selling divisions, bonus plans tie in both volume and profits. Field operating personnel, as well as salesmen, participate in sales division's bonus plans. This has had the effect of making the entire commercial organization cost conscious.

Registry of Reports and Office Standards

Every report issued to anyone in our organization is numbered and registered in a division of the controller's office. The schedule date for issuance is also recorded. This listing may in itself prove quite illuminating and may surprise you.

Under the controller's supervision is an office standards department which is constantly checking clerical routine and methods for correlating the activities of all departments, and watching for duplication of effort. The latter can so easily grow to large proportions in an organization of our size. All home office and branch requisitions for new forms and changes in present forms must pass through this department. It is a convenient place to spot new reports and stop them, if not essential.

Office Personnel

The director of office personnel reports to the controller. By the application of modern methods of job analysis, we have been able to intelligently appraise all clerical and the majority of supervisory activities and thereby establish job ratings and a relative salary scale on a reasonably scientific basis for all home office employees receiving less than \$5,000 per year. It required that all jobs within the organization be analyzed as to their duties and responsibilities, and that these duties and responsibilities be further analyzed into elements or factors common to all jobs, so that a fair and uniform basis of comparison among the jobs could be obtained.

Our program of job analysis and salary administration was set up primarily to eliminate discrepancies in our salary structure and to obtain a proper balance between effort expended by the employee and compensation received. It has not only accomplished the major objective we set out to reach, namely to provide management with a useful tool for salary administration, but it has become a constructive influence with every manager and supervisor in his approach to the better planning of work for his own division, and has led directly to simplification of methods with elimination of clerical detail.

Annual Report Check

Our experience has been that once a report is issued and falls into the hands of several people it is extremely difficult to eliminate. However, once each year we attach to each copy of every report issued a small fly-sheet asking the following:

- (a) Does this report serve a useful purpose in your hands?
- (b) Have you any suggestions for improvements?
- (c) Should it be continued?
- (d) Can it be discontinued?

Each person receiving a copy of the report is required to answer the questions on this fly-sheet. Fortunately for us, the president of our company personally interests himself in this check-up, or elimination schedule.

Progress Report and Time Cards

We require each supervisor in our several cost and accounting sections to submit a monthly progress report—brief and to the point—covering the prior month's activities of his group and his suggestions for future studies and improvements.

Periodically, but at least once each six months, we require every employee in the controller's division to keep a "time card" on his activities for a few days, and to suggest ways for simplifying his work. It is really surprising what a careful analysis of these records can reveal. If you have not already done it, try it sometime. Let me know if your face does not turn a little red once or twice.

Cost of Services

In a further attempt to minimize reports, and of course to minimize expense, we inform each interested division head at least once each year, usually at the budget appropriation time, as to the cost of services he requires. This permits him to challenge any charges to his profit and loss statement and gives us information to attack at the source on the cost of providing the service.

Our real problem in controlling reports is not with top management, but with the second strata. However, if the controller's office can be convinced that information in a report form will be a useful tool to them, we proceed to compile it on the theory that all statistical compilations should be made, in so far as practical, under the controller's supervision.

Conclusion

In the foregoing, I have endeavored to outline the reports which the Goodrich management consider useful tools in regulating and guiding our Company. I have also outlined in a rather brief manner the measures we have taken to interest both sales and production personnel in our figures and the controls on accounting and clerical expenses. Let me summarize briefly.

First, under reports we have:

1. Sales and Earnings Forecast with its essential corollaries.

- (a) Cash budget.
- (b) Purchasing budget and raw materials and finished goods control.
- (c) Capital expenditure budget.
- (d) Repairs and maintenance budget.
- (e) Advertising budget.
- (f) Other expenses budget.

2. Current bookings, billings and production.

3. Monthly and accumulative profit and loss, and surplus account.

4. Monthly balance sheet.
5. Divisional and commodity profit and loss statements accompanied by pertinent facts relative to current production and cost variances.
6. Quota attainments and industry comparisons.
7. Budget and actual expenses.
8. Production cost controls.
9. Executive authorizations; savings, actual and estimated.

Second:

1. We have the constant endeavor to control all expenses at the source.
2. We record basic, original cost and expense data in such form as will permit its use in all reports and analyses, whether daily, weekly or monthly, using a minimum of additional clerical effort. A study of mechanized accounting equipment is suggested.
3. We register all reports and establish a definite schedule of dates for issuance of reports.
4. Periodically, we notify the divisions we serve as to the cost of the service.
5. We adopt periodic check-up methods, such as job analysis.

It has been a pleasure to appear before you. I am sure you will understand that I am not holding up Goodrich cost accounting and cost control methods as ideal or as final. We have, of course, given them a lot of study and have earnestly endeavored to reflect therein, over a period of years, your most helpful counsel. They will serve this morning as an example of one company's interpretation and application of fundamental cost accounting principles.

I can think of no better way to close this paper than by repeating the original challenge: Are we giving management too many figures and not enough useful tools?

CHAIRMAN CHUBBUCK: Thank you, Mr. Bechler, for your very thorough report of the functions of The B. F. Goodrich Company and also for the suggestions as to topics for discussion later.

We are a little bit ahead of schedule and I wonder if there is anybody here who wants to ask either of our two speakers of the morning a question?

FRANCIS A. PAQUIN (*Auditor, Firestone Rubber Co., Fall River, Mass.*): I would like to ask Mr. Massel who bears the loss of excessive waste in a lump-sum government contract where the government furnishes the material.

MR. MASSEL: I understand the question to be: If there is excessive waste and spoilage in the utilization of the materials furnished by the government under a lump-sum contract, would the contractor be penalized for the excessive waste and spoilage? I cannot give any definitive answer to that. So far as I know, there has not been any direct instructions covering the point. I should imagine that the charge would depend upon the individual situation and the discretion of the contracting officer, who may ask Washington for specific instructions.

ROY F. SWENSON (*Cost Accountant, The Washburn Co., Worcester, Mass.*): I would like to inquire of Mr. Bechler whether, in the plan they are using at Goodrich, they have a suggestion system in force which receives the co-operation of both office and factory employees and in that way brings about a more effective and efficient control of their expenses. Are they using a suggestion plan on a monetary basis, for instance?

MR. BECHLER: Yes, we do have such plans in effect—one that operates for the factory, another for the office. Incidentally, the membership of the committees which pass on the merits of suggestions received under these plans and recommend the monetary awards to employees is known only to the executive officers of the Company.

HAROLD J. KENDALL (*Office Manager & Auditor, Paterson Parchment Paper Co., Bristol, Pa.*): Mr. Bechler, would you tell us how many products you manufacture?

MR. BECHLER: Nearly 30,000.

MR. KENDALL: Do you keep a standard cost on all of those?

MR. BECHLER: Yes.

AUDRY J. DUBE (*Cost Accountant, Pepperell Mfg. Co., Lewiston, Me.*): Mr. Bechler, how often do you adjust your standard costs to actual costs?

MR. BECHLER: Standard costs are not adjusted to actual costs in the sense that I like to think of standards being adjusted to actual. Actual costs are compared with standards monthly so that we have a constant and current record in front of us showing the deviations from standards that our actuals are presenting. We attempt to establish standards on the long-term basis for at least a year; we prefer a longer period. During the past ten years, however, we have had to change standards often and I am frank to tell you that under the present prevailing conditions, for the first time in our history, we are operating our factories beyond what we thought was practical capacity. Some of our standards are too low or too high, whichever way you want to put it.

WILLIAM T. BOWKER (*Plant Auditor, The Celotex Corp., New Orleans, La.*): I would like to ask Mr. Bechler whether, under present conditions of greatly expanded production, he has found it advisable in some instances to diminish the volume or the details of the reports, or if there is a tendency in that direction.

MR. BECHLER: Very definitely so. We are constantly doing this, and it is something that we must aim for at all times.

R. F. BEAVEN (*Factory Accountant, The Mengel Co., Louisville, Ky.*): I would like to ask Mr. Bechler what standards he uses as incentives for foremen and superintendents. What basis do you use for that bonus?

MR. BECHLER: The wage incentive plan for factory supervision ties in with labor effectiveness, waste, and with what we term semi-controllable and controllable overhead accounts. We operate under the Bedaux wage-payment plan. The foreman whose workmen operate above an average B hour receives a bonus. We establish waste standards for each commodity at the beginning of each year and we stick by them during the entire year so far as the factory supervision bonus is concerned. We follow the same plan for our overhead controls. We have a plan where we establish a fixed and variable figure for each expense account. The fixed may be \$100 a month, which is allowed through thick and thin. The variable may be tied up with the labor or with the volume of production going through the department or with some other activity factor. That is

why I made the statement that we compared our variable and semi-variable overhead expenses with a standard that was computed after the month's production was available so that we could give proper effect to volume. It is on that basis that our factory supervision bonus works. We tie up particularly waste, machine maintenance, power usage and labor effectiveness.

MR. BEAVEN: Is that paid monthly?

MR. BECHLER: Yes, it is paid monthly as a separate check.

JOSEPH A. PETRICK (*Cost Accountant, Kellogg Switchboard & Supply Co., Chicago, Ill.*): Mr. Bechler stated that he had job ratings for his salaried employees. The skill according to the job rating and the length of service being equal for a group of employees, would you pay all employees the same rate as indicated by the job rating? For instance, the highest rating for stenographers might be 200, and the salary set at \$150. Would you pay them all \$150?

MR. BECHLER: If all the stenographers in our plant did exactly the same work so that the point ratings under the job rating plan were identical, and all were performing satisfactorily and had the same number of years of service, we would pay the \$150 you mentioned; but that would be a most unusual circumstance.

We have in this job rating plan a minimum, a mean and a maximum. The starting employee naturally isn't paid as much as the experienced employee. We make it mandatory, however, that no manager can pay an employee in his department more than the maximum that is set up under the job rating plan. In order for such employee to earn more money, the manager or the director of office personnel must find a place to which to promote that man before we pay him more.

MAURICE H. BAITLER (*Office Manager, Perkins Machine & Gear Co., Springfield, Mass.*): In connection with an emergency plant facilities contract, where one of the governmental departments agrees to reimburse the contractor for construction costs over a period of sixty months, is there any ruling on whom the taxes will be assessed for such buildings or equipment?

MR. MASSEL: May I answer that first by mentioning the fact that the Office of Production Management, as you know, occupies a somewhat peculiar position in the picture. It does not make the final decision.

The general rule relating to emergency plant facilities contracts will depend, in the final analysis, on the Treasury decision defining the sixty monthly payments as income or as a return of capital. Thus far the Treasury decisions define those monthly payments as income. Because of that it is necessary to obtain a certificate of necessity before the plant is constructed. Later, it is advisable to procure a certificate of government protection, which is based upon a finding that the government's interest is protected. This is needed because the government is purchasing the plant.

A third certificate may be necessary. I do not believe that the issues are entirely clear on that. The third certificate would be a certificate of non-reimbursement. It may be that the Treasury will ask for certificates of non-reimbursement under such circumstance. The certificate of non-reimbursement relates to the supplies contract, as opposed to the emergency plant facilities contract which is tied up with the certificate of government protection. It certifies that the contract price does not include amortization.

I trust that, in the discussion which Mr. McCluskey will lead later, this point will be dealt with at much greater length.

LEONARD E. ZASTROW (*Assistant Controller, Bucyrus-Erie Co., South Milwaukee, Wis.*): As to clauses in contracts, who determines the particular type of escalator clause to be used in the labor and material provisions of the contract? Has the contractor the privilege of selecting his particular index or is he obliged to accept the index that is placed on the contract by either the Navy or the Army?

MR. MASSEL: Since the selection of the index to be used in an escalator provision is part of the bargain, it is difficult to determine whether the purchaser or the seller finally decides which one to use. I should imagine that at the present time the contracting officer sets the index numbers which are used in most of the contracts under his jurisdiction, because contractors are not familiar with index numbers, the way in which they are applied, and the relative qualities of the

various indexes which are available. That, I believe, would be present practice. How long that will continue, I do not know.

CHAIRMAN CHUBBUCK :^r Ladies and gentlemen, the meeting stands adjourned.

. . . The meeting adjourned at eleven forty-five o'clock . . .

SESSION II
GROUP DISCUSSIONS

TUESDAY AFTERNOON, JUNE 24, 1941

ARTHUR C. CHUBBUCK, *Chairman*

COST REPORTS TO TOP AND SUB MANAGEMENT
BASIS FOR EXPENSE ALLOWANCES UNDER THE FLEXIBLE BUDGET
ANALYSIS AND DISPOSITION OF VARIANCES FROM STANDARD COSTS
REQUIREMENTS FOR EFFECTIVE INTERNAL AUDIT AND CONTROL
EVALUATION OF INVENTORY CONTROL METHODS
JUSTIFYING INVESTMENTS IN PLANT ASSETS

WILLIAM E. PERRY, native Pennsylvanian, is Controller and a member of the Executive and Finance Committees of the Scranton Lace Co. A graduate of the Extension Division of the Wharton School, University of Pennsylvania, he was a member of the National Board from 1933-1936, and is a Past President of the Scranton Chapter. In 1938 he addressed the Chicago Convention on "Tools of Cost Control."

E. E. McCONNELL holds the B.C.S. degree from Northeastern University, and the M.B.A. degree from Boston University. A Certified Public Accountant of the states of Massachusetts and New Hampshire, he spent fifteen years in public practice, and became a partner of a New York City firm before joining his present company. Mr. McConnell is at present Controller of the Norton Co., of Worcester, Massachusetts.

EARL A. GREEN, a graduate of Pennsylvania State College, is Chief Auditor of the Armstrong Cork Co. He is a member of the National Board, Past President of the Reading, now Lancaster, Chapter, and has been a frequent speaker at N.A.C.A. meetings.

THOMAS A. DUNBAR was graduated from the Bentley School of Accounting and Finance in Boston. In 1927 he became Assistant General Auditor of the Boston Elevated Railway Co. He is President of the American Transit Accountants' Association, and served on its Executive Committee four years. He joined N.A.C.A. in 1928, was General Chairman of the Boston Convention in 1935, and is a Past President of the Boston Chapter.

WYMAN P. FISKE is Professor of Accounting and Director of the Sponsored Fellowship Program at Massachusetts Institute of Technology. A Past President of the Boston Chapter and member of the National Board since 1937, he was National Director in charge of Publications for three years, a member of the Technical Program Committee for the Atlantic City Convention in 1939, Chairman of the Technical Program Committee for last year's St. Louis Convention, and is at present National Vice President.

ROBERT P. BRECHT, Associate Professor of Industry at the Wharton School of Finance and Commerce, University of Pennsylvania, is National Second Vice President of the National Office Management Association. Since 1936 he has been Industrial Arbitrator and is now Impartial Chairman of the Adjustment Board, New York Shipbuilding Corporation. He is author of numerous technical articles, and co-author of *Management of an Enterprise*, *Practical Office Management*, and *The Philadelphia Upholstery Weaving Industry*.

COST REPORTS TO TOP AND SUB MANAGEMENT

Chairman: WILLIAM E. PERRY

Controller, Scranton Lace Co.,
Scranton, Pa.

CHAIRMAN PERRY: This morning we had a most interesting discussion by Mr. Bechler of the report system of The B. F. Goodrich Company. I think you know that such report systems do not just happen. They are the result of careful thinking and a great deal of planning. This afternoon we are going to try to pick up where Mr. Bechler left off, to see if together we can learn something about the organization of a cost report system, and—what is equally important—to discuss the problem of presenting or selling our cost reports to management.

I thought it would be helpful to have a sample set of cost reports as a basis for discussion. I might say that these reports are being issued by the accounting department of a textile concern which uses a standard cost system. I would like to review the reports with you very briefly, paying attention to the organization setup, the contents and the presentation of reports, rather than to the cost system from which the reports have been taken. As I do this, I hope that you in turn will make notes of your comments, criticisms, and suggestions on this particular set of reports, and—what is more important—that you will make mental comparisons with your own reports. After we finish the review, we will start our discussion period.

Before referring to the exhibits let me make a few general remarks about the cost reporting system. It has been organized by the controller who is responsible for its operation. The reports are issued in a series. The Statement of Operations is the master report and the other reports are all keyed into it. Standard instructions are issued for the layout of all report forms covering such points as kinds of paper to be used, uniformity of heading, style, type, etc. There are also instructions on typing and filing.

A report calendar is used to compare date finished with scheduled date. The reports are presented to the various officers as soon as they are prepared. Later, the important reports are included in an executives' handbook, a copy of which is kept on the desk of each executive at all times.

As you look at the various reports, I shall make additional comments on the style of the reports and the manner of presentation.

Report 1 is the Operating Statement for the month. As I said before, this is the master report and all the others are tied in with it. You will notice that it is a simple report with no comparisons and no percentages. You will notice also that it shows only the total variances and other operating figures. The report recognizes the operating divisions of the company—sales and manufacturing—but it does not recognize the different products or major departments. This report is presented by the controller to the president of the company with his verbal comments.

Report 2 is a very simple Sales Analysis with a percentage column, presented to the vice president in charge of sales and later included in the executives' handbook.

Report 3 is a Returns and Allowances Analysis. The purpose of this report is to show the number and value of returns and allowances by cause. This report is what you might call a simple statement of fact. It is presented to the vice president in charge of mill operations, who in turn writes a letter of comment and sends it to the mill foreman.

Report 4 is a Gross Profit Analysis. It shows the gross profit by types of outlet and by product. This type of report uses a double comparison: downward, the percentage of sales by product to total sales; and crosswise, the percentage of gross profit on each type of product. The vice presidents of the sales and the manufacturing divisions receive this report and it is later included in the executives' handbook.

Reports 5 and 6 deal with selling expenses. The first is the summary report of the type that Mr. Bechler referred to this morning. A simple comparison of budget with actual is made. You will notice that separate columns have been used for the amounts over and under the budget. Report 6 is a sample of the detail reports, such as is given to the sales offices.

Report 7 covers Price Variations on Materials. The purpose of this report is to separate the price variance factor from the usage factor on both raw and manufacturing materials. This is simply a comparison of actual against standard in dollars, with a couple of information columns: the actual and standard unit prices and the quantity. This report is presented to the mill vice president and also to the purchasing agent.

THE A. B. C. MANUFACTURING COMPANY
OPERATING REPORTS—MAY, 1941

REPORT NO. 1

STATEMENT OF OPERATIONS

SALES DIVISION

	<i>Amounts</i>	<i>Detail Report No.</i>
<i>Sales</i>		
Gross Sales	\$334,326	2
Less: Returns and Allowances.....	2,275*	3
Net Sales	<u>\$332,051</u>	
<i>Cost of Sales</i>		
Standard Cost of Net Sales.....	289,237*	
Gross Profit	<u>\$42,814</u>	4
Selling Expenses	32,044*	5 & 6
Trading Profit	<u>\$10,770</u>	
MANUFACTURING DIVISION		
<i>Variations From Standard Costs</i>		
Price Variations—Raw Materials.....	\$6,859	7
“ —Manufacturing Materials	1,384	
Usage Variations—Raw Materials	<u>1,408*</u>	8
Cost Variations—Labor	981	
Manufacturing Materials	1,331*	
Burden	6,415	9 & 10
Damages		
Finished Damages Produced.....	8,654*	
Less: Damages Sold	5,909	11
OPERATING PROFIT	<u>2,745*</u>	
	<u><u>\$20,925</u></u>	

* Denotes red figures.

THE A. B. C. MANUFACTURING COMPANY
OPERATING REPORTS—MAY, 1941

REPORT No. 4

GROSS PROFIT ANALYSIS

	Product No.	NET SALES		GROSS PROFIT	
		Amount	% of Total	Amount	% of Sales
RETAIL	1.....	\$30,090	9.1	\$5,872	19.5
	2.....	11,546	3.5	2,364	20.4
	3.....	16,235	4.9	2,967	18.3
	4.....	17,798	5.4	3,298	18.5
	5.....	3,146	9	600	19.1
	6.....	64,365	19.4	12,167	18.9
	7.....	6,244	1.9	525	8.4
		<u>\$149,424</u>	<u>45.1</u>	<u>\$27,793</u>	<u>18.6</u>
WHOLESALE	1.....	\$23,403	7.0	\$2,162	9.2
	2.....	8,980	2.7	843	9.4
	3.....	12,627	3.8	1,205	9.5
	4.....	13,843	4.2	1,162	8.4
	5.....	2,447	.7	264	10.8
	6.....	50,062	15.1	4,867	9.7
	7.....	4,856	1.5	305	6.3
		<u>\$116,218</u>	<u>35.0</u>	<u>\$10,808</u>	<u>9.3</u>
CATALOGUE & CHAIN STORES	1.....	\$13,373	4.0	\$864	6.5
	2.....	5,130	1.5	303	5.9
	3.....	7,216	2.2	450	6.2
	4.....	7,910	2.4	488	6.2
	5.....	1,398	.4	118	8.4
	6.....	28,607	8.6	1,843	6.4
	7.....	2,775	.8	147	5.3
		<u>\$66,409</u>	<u>19.9</u>	<u>\$4,213</u>	<u>6.3</u>
TOTAL		<u>\$332,051</u>	<u>100%</u>	<u>\$42,814</u>	<u>12.9%</u>

THE A. B. C. MANUFACTURING COMPANY
OPERATING REPORTS—MAY, 1941

REPORT No. 5

SELLING EXPENSE ANALYSIS

SUMMARY

Item	Budget	Actual	Over	Under
SALESMEN				
Travel Expenses...	\$5,000	\$4,664		\$336
Salaries & Comm...	10,843	10,557		286
Social Sec. Taxes..	284	278		6
SALES OFFICES				
New York†	2,367	2,451	\$84	
Chicago	308	278		30
Los Angeles	1,173	1,263	90	
GENERAL				
Advertising	5,000	5,000		
Samples	973	1,065	92	
Convention	2,373	1,992		381
MANAGEMENT				
Travel Expenses ..	300	282		18
Salaries	4,167	4,214	47	
TOTAL	<u>\$32,788</u>	<u>\$32,044</u>	<u>\$313</u>	<u>\$1,057</u>

REPORT No. 6

SELLING EXPENSE ANALYSIS

NEW YORK OFFICE

Item	Budget	Actual	Over	Under
Salaries				
Floor Salesmen ...	\$605	\$600		\$5
Office	750	750		
Social Sec. Taxes..	39	37		2
Rent	677	677		
Light	55	50		5
Repairs	25	36	\$11	
Stationery	20	15		5
Entertaining	100	190	90	
Depreciation	80	80		
Insurance	10	10		
Taxes	6	6		
TOTAL	<u>\$2,367</u>	<u>\$2,451</u>	<u>\$101</u>	<u>\$17</u>

† See Sample Department Report No. 6.

THE A. B. C. MANUFACTURING COMPANY
OPERATING REPORTS—MAY, 1941

REPORT No. 7

PRICE VARIATIONS—MATERIALS

RAW MATERIALS		Standard Price	Actual Price	Quantity Purchased	Total Value at Standard	Total Value at Actual	Price Variations
<i>Warp Yarn</i>							
10/2 Carded	.....	.28	.248	54,136	\$15,158	\$13,447	\$1,711
20/2 " "	.....	.31	.30	10,051	3,116	3,015	101
30/2 " "	.....	.36	.355	25,628	9,226	9,098	128
40/2 Combed	.....	.50	.41	2,107	1,054	864	190
<i>Spool Yarn</i>							
20/2 Carded	.....	.31	.245	39,371	12,205	9,646	2,559
30/2 " "	.....	.36	.355	60,033	21,612	21,312	300
40/2 Combed	.....	.50	.41	5,003	2,502	2,051	451
50/2 " "	.....	.55	.46	3,531	1,942	1,624	318
60/2 " "	.....	.60	.52	5,362	3,217	2,788	429
70/2 " "	.....	.72	.64	893	643	572	71
<i>Bobbin Yarn</i>							
80/2 Combed	.....	.95	.92	14,780	14,041	13,598	443
90/2 " "	.....	1.06	1.03	1,891	2,004	1,948	56
100/2 " "	.....	1.19	1.16	1,849	2,200	2,145	55
110/2 " "	.....	1.45	1.40	974	1,412	1,364	48
MANUFACTURING MATERIALS							
Boxes	.....	.039	.033	38,901	1,509	1,267	242
Cartons	.....	.203	.181	4,927	1,001	891	110
Cellophane	.....	.01	.0077	16,000	160	123	37
Cord & Twine	.....	.38	.305	205	78	63	15
Dyes	.....	.20	.167	14,445	2,889	2,410	479
Envelopes	.....	.0056	.0052	171,200	961	875	86
Paper	.....	.091	.043	208	19	9	10
Soap	.....	.08	.056	13,320	1,066	741	325
Tape	.....	1.64	1.48	118	193	175	18
Thread	.....	.565	.501	953	539	478	61
					<u>\$98,747</u>	<u>\$90,504</u>	<u>\$8,243</u>

THE A. B. C. MANUFACTURING COMPANY
OPERATING REPORTS—MAY, 1941

REPORT No. 8

USAGE VARIATIONS—RAW MATERIALS

<i>Loom No.</i>	<i>Standard Cost Allowance Inc. Waste</i>	<i>Actual Usage at Standard Prices</i>	<i>Usage Variation</i>	<i>% of Standard</i>
1	\$4,006	\$3,993	\$13	99.7
2	4,137	4,298	161*	103.9
3	4,692	4,623	69	98.5
4	3,675	3,856	181*	104.9
5	4,322	4,592	270*	106.2
6	3,684	3,713	29*	100.7
7	5,003	4,967	36	99.3
8	4,751	4,683	68	98.5
9	3,573	3,693	120*	103.4
10	3,798	3,903	105*	102.8
11	3,674	3,715	41*	101.1
12	3,916	4,003	87*	102.2
13	4,875	4,822	53	98.9
14	5,163	5,101	62	98.8
15	4,572	4,730	158*	103.5
16	4,564	4,673	109*	102.3
17	5,003	5,180	177*	103.5
18	4,738	4,862	124*	102.6
19	3,786	3,973	187*	104.9
20	4,803	4,763	40	99.1
	<u>\$86,735</u>	<u>\$88,143</u>	<u>\$1,408*</u>	<u>101.6</u>

* Denotes red figures.

THE A. B. C. MANUFACTURING COMPANY
OPERATING REPORTS—MAY, 1941

REPORT No. 9

ANALYSIS OF COST VARIATIONS BY COST CENTER

	Standard Cost	Actual Cost	Cost Variations	Level of Operations	Cause of Variations Management Changes	Foremen's Efficiency	Foremen's Budget Allowance of Budget	% Actual
SERVICE COST CENTERS								
Boiler	\$6,196	\$5,550	\$646	\$302	\$60*	\$404	\$5,954	93.2
Power	2,343	2,144	199	152	40*	87	2,231	96.1
Plant & Building	2,649	2,418	231	164	47*	301	2,532	88.1
Machine	2,097	1,326	771	132	52*	691	2,017	65.7
Trucking	587	687		40			547	125.6
Design	5,260	5,099	161	203	123*	81	5,180	98.4
Pattern	4,660	3,958	702	286	140*	556	4,514	87.7
Gen. Administrative..	28,305	27,206	1,099	447	240*	892	28,098	96.8
TOTAL	\$52,097	\$48,201	\$3,896	\$1,726	\$702*	\$2,872	\$51,073	94.4
Transferred to Productive Cost Centers...	\$52,097*	\$48,201*	\$3,896*					
PRODUCTIVE COST CENTERS								
Yarn preparation† ...	\$4,440	\$4,250	\$190	\$220	\$64*	\$34	\$4,284	99.2
Bobbin	7,760	7,409	351	308	101*	144	7,553	98.1
Warp	1,594	1,395	199	137	45*	107	1,502	92.9
Weaving	55,509	50,875	4,634	2,300	300*	2,634	53,509	95.1
Mending	3,375	3,331	44	288	15*	169*	3,162	105.3
Bleach	4,733	4,541	192	270	78*	78*	4,463	101.7
Dress	16,876	17,546	670	320	200*	790*	16,756	104.7
Cutting & Splitting....	17,056	16,891	165	350	226*	41	16,932	99.8
Finishing	17,835	17,597	238	393	37*	118*	17,479	100.7
Wrap & Label	9,675	9,594	81	364	122*	161*	9,433	101.7
Stock Room	6,011	5,370	641	260		381	5,751	93.3
GRAND TOTAL	\$144,864	\$138,799	\$6,065	\$5,150	\$1,110*	\$2,025	\$140,824	98.6

* Denotes red figures.

† See Departmental Report No. 10.

THE A. B. C. MANUFACTURING COMPANY
OPERATING REPORTS—MAY, 1941

REPORT No. 10

FOREMEN'S BUDGET

YARN PREPARATION COST CENTER

	Budget	Actual	Over	Under
	Allowance	Cost	Budget	Budget
LABOR				
Winding Spool Yarn...	\$1,307	\$1,241	\$ 66	
Winding Warp Yarn...	172	139		\$ 33
Winding Bobbin Yarn...	125	125		
Backwinding	85	85		
Stripping	50	50		
MATERIALS				
Paper	4	2		2
Sizing	35	40		5
BURDEN				
Supervision	290	364		74
Handling	331	229		102
Repairs	42	21		21
Depreciation	470	429		41
Insurance	25	23		2
Taxes	228	229		1
Share of Boiler	132	124		8
Share of Power	117	116		1
Share of Plant & Bldg.	209	186		23
Share of Gen'l Admin.	818	847		29
TOTALS	\$4,440	\$4,250	\$109	\$299

REPORT No. 11

ANALYSIS OF FINISHED PRODUCTS
DAMAGED IN COURSE OF MANUFACTURE

Loom No.	Std. Cost Value of Production	Weaving Damages Per Cent of Production	Value	Per Cent of Production	Value	Per Cent of Production	TOTAL DAMAGES
1	\$ 13,700		\$300*	2.2			2.2
2	13,963		315*	2.3			2.3
3	14,573		573*	3.9	200*	1.4	5.3
4	13,273		402*	3.0	168*	1.3	4.3
5	14,007		296*	2.1	28*	.2	2.3
6	13,566		250*	1.8	96*	.7	2.5
7	14,500		266*	1.8			1.8
8	14,473		403*	2.8			2.8
9	13,109		294*	2.2			2.2
10	13,342		180*	1.3			1.3
11	12,973		216*	1.7			1.7
12	13,496		223*	1.7			1.7
13	14,750		329*	2.2	218*	1.5	3.7
14	14,896		287*	1.9	162*	1.1	3.0
15	13,921		104*	.7	107*	.7	1.4
16	14,377		502*	3.5	204*	1.4	4.9
17	14,502		490*	3.4	152*	1.0	4.4
18	14,042		360*	2.6	117*	.8	3.4
19	13,462		200*	1.5			1.5
20	13,723		510*	3.7			3.7
TOTALS	\$278,648		\$6,500*	2.3	\$2,154*	.8	3.1
TOTAL DAMAGES							\$8,654*

* Denotes red figures.

Report 8 deals with Usage Variations on Raw Materials. In our cost system we try to separate the price variance from the usage variance. This is the second of the two—an attempt to control the actual material consumption as against the allowances in the standard cost. On this we have two comparisons, the dollar value and the percentage of standard. This is presented to the vice president in charge of mill operations, to the superintendent of the weaving rooms, and also to the department handling the raw materials.

Reports 9 and 10 are the manufacturing budget reports. Number 9 is the summary report, showing by cost center the total cost of operation, total covered by the standards, the variations, an analysis of the variances by cause, and the build-up of the department foreman's budget. These figures are just the totals for the departments or cost centers and, of course, this is prepared after the detail has all been covered. Report 10 shows the detail budget for one of the cost centers. This is all that the foreman receives. The official in charge reviews the operating budget of each department with its respective foreman. Any requests for additional information arising during this conference are referred back to the cost department.

Report 11 presents an analysis of finished product damages. This is presented to the vice president of mill operations and also to the foreman of the finishing and the weaving departments. Later, this report is included in the executives' handbook.

This is a very simple set of cost reports, and is given out solely to help in our discussion. The meeting is now yours.

RESPONSIBILITY FOR REPORT SYSTEM

I think we have a real question as to where the responsibility for organizing the cost report system rests. I might ask for a show of hands as to whether it belongs to the head of the cost department or in the controller's office. How many feel it belongs in the controller's office? (A show of hands.) That is not 100 per cent. How many feel that it belongs somewhere else? (No hands raised.) We don't seem to have any argument.

DISCUSSION OUTLINE

COST REPORTS TO TOP AND SUB MANAGEMENT

I. ORGANIZATION OF THE REPORT SYSTEM

1. Who is responsible for organizing the report system—
 - (a) Accounting officer or other top executives?
2. Reports—on what?
 - (a) A general survey to see that management is properly and completely informed.
3. Reports—to whom?
 - (a) Should top management see all reports?
 - (b) Should sub management get only necessary operating reports or also those of an informatory nature?
4. Details of organizing the report system.
 - (a) Design of report forms
 - (1) Set of instructions.
 - (2) Uniformity of layout, size, etc.
 - (b) Preparation of reports
 - (1) Standard instructions for typing, binding, number of copies, etc.
 - (c) Report calendar
 - (1) To insure reports being issued on time and to the proper executives.
 - (d) Filing system for reports
 - (1) Where and how?
 - (e) Periodic review of all reports
 - (1) To eliminate, to revise, to improve, etc.

II. STYLE OR TYPE OF REPORTS

1. Should reports be issued as part of an interrelated series, or each as an independent subject?
2. What style or type of report is best suited for—
 - (a) Top management?
 - (b) Sub management?
 - (1) Figures
 - (2) Charts
 - (3) Percentages or ratios
 - (c) To what extent should management's likes and dislikes be recognized?
3. What comparative data should be included in cost reports?
4. Should reports be made primarily to cover one person's responsibility, or to cover an element of operations?

III. PRESENTATION OF REPORTS

1. When—as ready or in a complete set?
 - (a) How soon after closing of cost period?
2. By what means?
 - (a) To top management?
 - (b) To sub management?

- (1) Simply put on the executive's desk.
- (2) Conference method of review, either with individual officers or in executive committee.
3. At what point should the controller's comments on the results shown by reports be introduced?
 - (a) How far should a controller go in his comments?
4. Should reports be accompanied by analyses of out-of-line items?

IV. REPORT FOLLOW-UP

1. Is a systematic check-up on out-of-line items desirable?
 2. Is it the controller's responsibility to call to attention of top management:
 - (a) Consistently poor performance of other executives?
 - (b) Unprofitability of certain lines?
-

WILLIAM M. BECHLER (*Assistant Controller, The B. F. Goodrich Co., Akron, Ohio*): Isn't it the responsibility of the specific division manager of an accounting or cost department to present to his superior, we will say the controller, in longhand, if you please, information which he thinks might be essential? The controller should decide at that point. If he is in doubt, he should discuss it with the highest executive officer of the company, if necessary, or with other executive officers, to determine whether or not in their opinion that report is essential or will serve a useful purpose?

CHAIRMAN PERRY: I think you spoke about a suggestion or progress report system this morning. Do you feel that that would be the place where people in an organization would give expression to their ideas about what ought to go into reports?

MR. BECHLER: In our particular setup, we use the progress report, as we term it, more for the purpose of giving the manager credit for suggesting the report, rather than as a means for suggesting the report. We want suggestions from day to day or week to week, rather than having them come only from the progress report. He takes credit for it in the progress report. I want him to come in to me any hour of the day or any day in the week with these suggestions.

CHAIRMAN PERRY: We tackle that by a little different approach, but try to get the same result. The key men in our organization give me what is called a monthly job report and one section of that report is devoted to suggestions. That would be the place where they would suggest any new report which they thought would be of use to the management.

STANDARD INSTRUCTIONS

Let us move along and see if we have any discussion on the details of organizing the cost report system. I might ask, to start off, how many have in their companies standard instructions on the preparation of report forms. We might have a show of hands. (About 25.) Would some of you like to comment on the results you have had? Do these instructions work out? Are they followed; are they helpful?

JOHN F. McCABE (*Accountant, American Hard Rubber Co., New York, N. Y.*): I should like to ask who is responsible for standardizing methods, forms, headings, typing and all the other matters necessary to carry out that procedure. Is that a duty of the controller's office or is it a duty of the standards department?

HAROLD R. KNUDSEN (*General Cost Accountant, Anaconda Wire & Cable Co., Hastings-on-Hudson, N. Y.*): I think that problem depends largely on the size of the organization. If the organization will warrant a special department for that purpose, fine. You can undoubtedly draw some people out of your organization who, by their experience and their application to the problems they have had, will be good men for the work. However, you will probably find that a department of that type will run into difficulties when it tries to put its ideas over to the various departments with which it must work. The problem is to get a department head who is able not only to determine the information that will be of value to the executives, but also to put across to the people who have to make up those reports, the idea that his way is the way to do it. I have no question at all but that the special department is the answer to the problem.

CHAIRMAN PERRY: How about standard instructions for the minor details of typing and filing? How many companies represented

here have such instructions, particularly for reports? (About 8.)

May we have some comments from some of you as to the advisability of going into such details as this.

MR. BECHLER: I don't want to monopolize your time, but in the larger organizations I think you will find it very advantageous to have one, or not more than two, central filing places for reports. We have found in our organization that every executive or his secretary likes to maintain a file of reports. You can let him read it and destroy it when he is through if you have one central place with a duplicate copy. I think it will save a lot of filing space and a lot of trouble.

PERIODIC REVIEW AND ELIMINATION OF REPORTS

CHAIRMAN PERRY: That is a good suggestion. How about periodic review of all reports? Those of you who were here this morning heard about Mr. Bechler's sheet which he attaches to his reports once a year to see if the report is serving its purpose, whether it can be improved and that sort of thing. Does anybody have any other approach to this problem?

SIDNEY KNIGHT (*McKinsey & Co., New York, N. Y.*): Mr. Chairman, we heard this morning of a very comprehensive method of dealing with this problem. In many companies, the management and operating thinking are by no means so advanced. In one particular case, the plant superintendent had a very effective method. If the cost accountant came down and said, "I would like to have your men supply this information for a report I am making," his invariable reply was, "What report are you going to cut out?" He was absolutely adamant on that policy and the cost accountant always found something he could do without.

MR. KNUDSEN: That is a good thought. From the cost accountant's point of view, we have found that a good way to review our reports is to forget to make them out, and if nobody "hollers," they are not needed. That has worked very effectively.

GUY E. SHARPE (*Controller, Red Jacket Mfg. Co., Davenport, Iowa*): We find that the way to eliminate reports is to put out an

incomplete report by leaving one page out, but marking the page. We let it go 30 days, and then call for the report back to insert the page. Then we inquire why it was not asked for.

GETTING THE COST OF COST REPORTS

NORMAN R. REED (*Cost Accountant, Chase Brass & Copper Co., Waterbury, Conn.*): I wonder if it might not be a good idea to put the cost of making the report on the report somewhere, the number of hours taken and the cost to make up the report.

CHAIRMAN PERRY: I think Mr. Bechler said his company did that. Does anybody else figure out the cost? I came up through the cost department, but there is one thing I could never figure out and that was the cost of making cost reports. How do you do it?

MR. BECHLER: It is a difficult job, I will grant you that.

CHAIRMAN PERRY: Why don't you tell us a little bit about it?

MR. BECHLER: Of course, there is certain fundamental information we must have and we try to ascertain as accurately as we can the cost of what we need for strictly accounting purposes, assuming all we did was to compile the consolidated sales and earnings report of the company. That portion of the expense is prorated arbitrarily over the hours that it takes us to draw off all subsidiary reports. As I say, it is more or less arbitrary, but it is the best that we have been able to think out to date.

There is a fundamental, basic fund of information you must have to draw off the consolidated profit and loss statements. From there on, some division of the company or some individual executive is responsible for the report, whether you think he should have it or whether he thinks he should have it. We prorate this cost of the fundamental report on the basis of the hours that it takes to compile the subsidiary report. That is our basic approach.

H. D. STEHMAN (*Assistant Controller, Armstrong Cork Co., Lancaster, Pa.*): Our system is very similar to that of Goodrich. We occasionally find that a report requiring an hour or two to pro-

duce could be eliminated, but it is extremely hard to show any real saving with a report of this type. On occasion, by eliminating a report it may be possible for us to take on certain new reports requiring about the same amount of time. Many of our reports are produced directly by mechanical equipment. The fact that the machine may be idle for short periods of time as a result of the elimination of certain reports does not actually save any money for the company. It is quite a problem to determine the cost of any one report due to the fact that many reports stem from certain basic information which cannot be dispensed with.

CHAIRMAN PERRY: It is a real problem to allocate cost against reports. I would like to have some further comment on that.

GEORGE W. CONTANT (*Certified Public Accountant, Buffalo, N. Y.*): You have another cost there, and that is the cost of the wasted time of the man looking over the report, if it doesn't serve any useful purpose.

FRANK P. FLINT (*Systems Supervisor, Koppers United Co., Pittsburgh, Pa.*): We have a problem in the large number of dissimilar subsidiaries or divisions to which we have to prorate our accounting cost. Incidentally, I am speaking of all central office accounting, not just cost accounting. About every two years, we have the employees throughout the accounting department keep a detailed record of their time by jobs and by company. When these time units are multiplied by the employees' rate we have the labor cost of the job.

Supplies expense, in large part, is represented by special forms which can be charged direct to a specific job or easily prorated over the several jobs on which they are used. The balance of supplies expense, being mainly the normal bulk supplies, is prorated on the basis of direct labor unless extraordinary conditions indicate a different basis. Determination of machine time for costing machine rental and expense is ordinarily made from the labor time-study. Again, hours times rate yields expense. Floor rent, light and similar charges are spread by a rough approximation of the space occupied by the employee or by the machine. Other service items customarily follow direct labor.

We find that for an accounting department of 200 people, we can work out in about three weeks the detailed cost of every single report we turn out for all the subsidiaries. This is very valuable information. We don't go to the extent of appending the total cost on each report as it is issued, but the various controllers of the subsidiaries or divisions are made aware of the cost of each report.

CHAIRMAN PERRY: That is very interesting. May I ask a question? Does the overhead cost of these reports include the salary of the supervisor?

MR. FLINT: It includes everything except the auditor's salary; I suppose in other companies he would be called controller. All costs except the salary of the top man are included; that is not prorated as it is considered management overhead.

CHAIRMAN PERRY: I take it that you do not make the division which Mr. Bechler referred to between the cost of the reports themselves and the cost of preparing the fundamentals?

MR. FLINT: No. I might say that there are obviously a good many reports stemming from the same source. We follow the same principle that he does in determining the cost of the central report—for example, the sales analysis. The sales analysis for each division is a central report and one which, of course, will always be made. But, in addition to that, there are all sorts of subsidiary reports, sales by salesmen, sales by plant, sales by everything except the original one which is sales by product. Those all accumulate costs, but the costs we accumulate are only the additional costs for preparing those subsidiary reports. Of course, when the controller gets the complete set he finds it costs him \$400, we will say, to get his basic report and maybe \$25 apiece to get the subsidiary reports, and he can then decide whether it is to his advantage to approach the auditor and ask for more subsidiary reports on approximately a \$25 basis, whether some should be cut out or whether he wants some consolidated in the main report. The subsidiary reports take only their actual cost after the major report is run. All preparatory work is costed into the major report.

C. E. HEADLEE (*Director of Industrial Accounts, Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa.*): I was interested

in the comment by Mr. Flint. There is an element of costing in preparing reports that we frequently overlook. Let us assume that the cost of making our payroll represents 25 per cent of our accounting cost. I am wondering how much of that cost could be eliminated if it were not for the reports that are taken from that basic information.

As another example, we are frequently making reports from invoices. I know that in one case some time ago we discovered that quite a bit of our invoicing cost was for the coding of those invoices and putting other information on them for the later preparation of statements. I am wondering if Mr. Flint gets that element into the cost of preparing his statements.

MR. FLINT: We do. As I said, our reports cover general accounting as well as cost accounting. We start at the beginning and include in the sales analysis, for example, the cost of the coding, all the costs in the tabulating room, including supplies and rental, and everything else that can properly be charged to it. The result is that if the set of sales reports were discontinued, it would wipe out the whole coding section, its proportion of the tabulating department, the stenographic room, the mimeographing department and so on and so forth. We think we get a complete cost of doing that specific job and a cost which, if the job were discontinued, would be representative of the saving.

Someone suggested that some of the costs are perhaps theoretical, that if you discontinue the report, you don't discontinue the cost. That is very true. If any of you have tried to cost, you will find, even with a time study by individuals, that you don't get 100 per cent machine efficiency, or 100 per cent labor efficiency. There is always a little slack and all you do is add to that slack if you discontinue a single report. Of course, if it is a large enough report, then you actually can revamp the personnel, or the machine expense, or whatever creates the cost in that particular department.

SELLING COST REPORTS TO MANAGEMENT

RUDOLPH MATTHAUS (*Office Manager, Muirson Label Co., Inc., New York, N. Y.*): With reference to the need for and usage of reports, I think it is definitely a responsibility of the department which compiles the figures to determine what value these figures may have, and to issue reports accordingly, rather than to wait for some-

body to call for these figures as the need for certain information arises. If the department has previously determined that certain reports contain an important message, yet finds that they are not being utilized, such reports should be revised so that they will more clearly and forcefully present their story. In this way they will no longer be "merely figures" but become "useful tools."

MR. CONTANT: I think sometimes when reports have no apparent use, or rather when they don't appeal to the management, instead of discontinuing them, it may be a matter of educating the executive to the use of those reports, of finding out why they are not acceptable in their present form and revamping them so that they are usable.

CHAIRMAN PERRY: I have always maintained that the job is only half done when the report is made, that after we have done the best job of preparatory work in getting our figures in shape, we still have the job of selling the report. I think that somewhere in the controller's organization lies the responsibility of getting it across. I think it is half the job.

JAMES W. JONES (*Chief Bookkeeper, Glenn L. Martin Co., Baltimore, Md.*): I am somewhat new at this cost accounting business. I am in the aircraft industry and we are feeling our way, so to speak. Heretofore our company has always accumulated costs on a job-contract basis. With an eye to the future, we have devised a production-order system to give us costs on assemblies going into the airplane. I am not able to predict the future, but I imagine that we will eventually get into standard costs on many of the parts, depending on how well the industry establishes the types of airplanes. At the present time, airplane models have changed so rapidly that before you get one off the assembly line, you have a new one on the board ready to go into production.

We don't prepare many cost reports because of the methods used in cost accumulation. I was wondering whether we would be wise in our accounting department to go ahead and prepare a lot of reports and submit them to the vice president in charge of manufacturing if he weren't going to use them. We accumulate the costs on the contracts and show the costs in relation to budget figures, which were estimated when the contracts were entered into. My experience

has indicated that the management doesn't always use the reports.

We went so far at one time as to forecast our budget requirements for financing probably sixteen to eighteen months in advance, and one month, because of the press of other things, the budget report was not made up. Nobody asked for it and I didn't make it up for several months thereafter. Now, that is an example of what sometimes happens to reports. My particular problem is: Should we wait for the vice president in charge of manufacturing to ask for these reports? Should we anticipate his requirements to some extent? Or, should we somehow combine the two?

ORVILLE E. SHARNBORG (*Controller, The Vendo Co., Kansas City, Mo.*): My problem is somewhat similar. In our costing we start from the engineering blueprint for parts and work from each individual item to the sub-assembly and from the sub-assembly to the completed article. In that way, even though we change models every year and make various changes during the year, we have a cost and a consequent selling price tied up directly with each particular model.

With regard to management reports, I feel that the "sale" of these reports is most important. It seems to me that that is our function. We have going across the controller's desk sales statistics, analyses, tabulations, profit and loss statements, balance sheets, production figures and costs, and it is his job, it seems to me, to interpret these reports. The managements with which I am familiar know very little about figures. Perhaps even the ability to read the balance sheet is lacking. I believe that in addition to selling reports to management we should attach to our main reports each month, particularly the balance sheet and cumulative profit and loss statement, suggestions based on other reports that we have on our desk, whether they are released to top management or not. On the basis of these suggestions, they can call for and follow through the detailed reports which we have.

ALFRED G. BLOCK (*Secretary & Treasurer, Barnes Drill Co., Rockford, Ill.*): I think Mr. Sharnborg is right. Often management does not know what type of reports they need. Sometimes you have a cost-minded management, sometimes you have an engineering-minded management and sometimes you have a factory-minded management. In the smaller companies you have to put yourself in their

position in order to make up the reports and present the information they want. In our case, we prepare the information. We prepare just one copy which we pass around to board members, for instance, and then file permanently in a binder. In that way the reports do not get spread around promiscuously and they are held more confidential. We prepare the information even if it isn't to be used immediately, because invariably someone will request a report. If you don't have the information available, you will have to do some real searching to get it together in time so that it will be of value.

MR. SHARNBORG: I would like to follow through on what I said a moment ago. I agree that there are two types of reports. In the first type we are accounting for or relating what has actually happened, and here the controller can express his ingenuity by the use of charts. I attempt to use a chart either in place of or as a subsidiary to every statement, using bar charts, circle or pie charts, or pictorial charts.

Your second type of report is in the form of a recommendation based on the data previously submitted. Often a bar chart with the notation "Is this so?" will open the door to the suggestion or recommendation.

CHAIRMAN PERRY: How do you get those reports to the management? Do you take them in personally?

MR. SHARNBORG: I take them in personally.

CHAIRMAN PERRY: And discuss them when they are presented?

MR. SHARNBORG: Yes, allowing as much time as is needed, whether it takes one hour, one day or two days.

CHAIRMAN PERRY: How about department foremen and what we call sub management?

MR. SHARNBORG: We follow up later and as questions arise, but we send the reports to the sub management.

METHOD OF PRESENTATION TO MANAGEMENT

CHAIRMAN PERRY: We are getting into the presentation of the reports, which is part of the problem of selling them. While we are

on this subject, suppose we have a show of hands as to how many, when the reports are finished, send them in to the management by office boy? There is one who follows this practice.

MR. KNUDSEN: There is a reason for our method. The reports are simply an accumulation of figures which the management has requested. Reports, to me, can be divided into two types: first, there are reports on what has been done; second, there are reports to show what should be done. Our opportunity comes when we gather figures and supporting information which the management can use in doing what we think the management should be doing. That, too, is where interpretation enters in.

CHAIRMAN PERRY: In other words, you think there are the usual and ordinary reports that might as well be sent to management by the office boy and the special report which should be delivered by actual contact. I send all my reports in to management through the office boy. I feel that it is a very wise thing to let the management see the figures and digest them a little bit before we start to talk about them.

W. HERBERT PALMER (*Assistant Treasurer, Lowe Paper Co., Ridgefield, N. J.*): It seems to me that the attitude of management toward the chief accountant has considerable to do with how these reports should be presented. If management feels that the chief accounting executive is a high-class or overrated bookkeeper, he will present his reports that way. If he is willing to let the controller or the chief accountant have the position to which he is entitled, then he should have the report presented so that it can be interpreted by management.

This is critical of the accounting profession, but accountants have stood by to a considerable extent and permitted engineers to take the field of costs away from them. They are also permitting lawyers to take taxes away from them. I think that if we interpret the accountant's position in an organization to be all-inclusive, to be the prophet as well as the historian, to be the one to show what the profits should be and what they are, what you have lost and why you have lost it, then footnotes and explanatory notes on reports will be of considerable value to management.

To my way of thinking, it is a question of selling the position first.

If you sell the position of your chief accountant and his importance to your company and to management, then you have gone a long way towards answering these other questions.

THOMAS E. HURNS (*Assistant Secretary, Detroit Edison Co., Detroit, Mich.*): I would like to say one word in defense of sending the statement in by the office boy. In my opinion, the good report, if it is a perfect report, doesn't require any verbal explanation. It should be made up so that, if it raises questions in the mind of the person for whom it is addressed, it also answers those questions. I think the best plan is to send the report in to him. If it is a good report, he will be able to understand it and answer all the questions that arise in his mind. If it is a poor report, you can tell it is a poor report by the number of questions he asks.

HOWARD C. ZOOK (*Cost Accountant, Wooster Brush Co., Wooster, Ohio*): I think the way to solve this problem is to create an interest in the report before the report is made out, then you will not need to sell it to anybody.

MR. STEHMAN: I know an old gentleman who lives in a small town. I don't think he ever did work, and I don't think he is working now, but he has done a lot of whittling in his time. He said, "Stehman, find out what the people want and then give them plenty of it."

By the same token, I think that is what we must do in presenting our reports to our superiors. Give them a report that they understand and will use in the administration of the business. In our Company we have five selling divisions, each one headed by a sales manager, together with a number of assistant sales managers. You can send a report to some of these individuals and it will serve its purpose, while with others much better results can be obtained by sitting down across the desk and discussing the exceptional items in the report. After all, I think you must adjust the presentation to the executive's personality.

CHAIRMAN PERRY: We don't want to get our discussion period unbalanced. We have another section here that we want to discuss. Suppose we just have an expression of the methods of presentation that are being used. Let us have a show of hands. We are talking about top management first. Those who use the office boy method

of presentation, raise your hands. (24) How many use the conference method in presenting their reports? (45) We might also ask in this connection how many use reports that have footnotes or explanatory comments typed right in as part of the report? (43)

TYPES OF REPORTS—SPECIAL REPORTS

On account of time, I think we shall have to leave this interesting discussion on the presentation of reports. Let us consider the style or type of reports. We will start first by asking whether or not there is any advantage in trying to set up the statement of operations as it has been set up in this typical cost sheet as the key statement, and relating the other reports to it by taking each line that means something and supporting it with the detail? How many have their report systems set up to do something at least similar to this? (39)

MR. HEADLEE: I am going to comment on Mr. Perry's question, but in connection with the last discussion. The presentation of reports, or the method that is followed in presenting reports in our company, is governed to some extent by the type of report, as I think it is everywhere, as well as by the type of manager that we have to deal with. We have come to the conclusion that special reports, reports necessitating a special study, are very valuable and that noticeable action is taken on such reports perhaps more frequently than is the case with regular reports.

My department tries to prepare one such report per month. We may not prepare that particular report again for a year. However, we do sometimes prepare such a report and have it called for regularly. I think the controller of our company prepares on an average three such special studies per month. In these cases, of course, the presentation is usually not by the office boy method. There are questions regarding the basis for such reports that may need explanation beyond what you can give in the report itself. Generally the basis used for regular reports is the office boy method.

Coming now to this point you mentioned, the special type of report is usually not keyed in with any existing report. Regular reports are tied in. We do have a numbering system that identifies the particular type of report we are talking about. As I see it, our plan is pretty much the same as you outline here. For example, you have your No. 6 report. We refer to it as our No. 25 series of statements,

which is the type of budget and actual expense statement used by our sales, administrative and engineering departments.

MR. CONTANT: Mr. Perry, it seems to me that if your report system is properly developed, the necessity for special reports should be minimized. Where you find that special reports are constantly being called for, you are not giving the information that is required. Your reports should be modified to the extent that that information is worked in as a permanent part of the report.

CHAIRMAN PERRY: I wonder what subjects you would consider required special, rather than regular reports.

MR. HEADLEE: As an example, we had a wage increase about a month ago, and at the present time we are making a study of the effect of that wage increase on various elements of our costs and inventories. We will make some special reports on that in addition to any information that was furnished on that subject prior to the time the wage agreement was entered into. That is typical of one type of special report.

CHAIRMAN PERRY: Do you care to give other examples?

MR. HEADLEE: Occasionally we will go into considerably more detail in connection with inactive or slow-moving stocks than we might regularly report to our management.

Still another special report is a tabulation of our factory expenses with the idea of comparing division with division. It is too voluminous a job, I would say, for us to do this regularly. Even if we did it regularly, I am not sure that management would find the time to make the comparisons or studies that we hope they will make of the special tabulation.

SIMPLE VERSUS COMPLEX REPORTS

CHAIRMAN PERRY: Now let me ask what style or type of reports are best suited for top management, recognizing, of course, that management has its likes and dislikes.

Let us have your experience in this connection. Some reports that are prepared have in them a simple comparison or a simple statement

of fact and there are other reports that are fairly complicated where you might say we have compound or complex comparisons. Is there any advantage in simplifying reports? For example, Report No. 2 is quite a simple report; No. 3 is very simple. How about reports 4 and 9, however?

Does anybody have any comments on these types of reports, or how long and detailed they should be?

FRED W. MURRAY (*Public Accountant, Jordan & Jordan, Portland, Me.*): Top management should receive from the cost accountant a comparative statement showing the determination of profit by product, and showing current operations as compared with results of a year previous and with the standard cost. All supplemental detail should be available upon request by top management for regular periodic checks or for study in case of an unpredicted fluctuation in profit.

WILLIAM E. JACKMAN (*Accountant, Eastman Kodak Co., Rochester, N. Y.*): Mr. Chairman, I have heard considerable talk about the reports presented to top management. It seems to me that one of the important things that is facing industry today is the necessity of interpretation of reports to sub management in such a way that errors can be corrected and that problems of control at the source and on the line can have definite and quick action. I would like to have an expression of experience as to whether it is more effective to deal with the sub management individuals on a basis of conference with very simple reports, backed up by detailed reports where there are any questions on the part of the sub management; or whether it is better merely to design a set of reports which can be presented to the submanagers through the office boy method and then await their comment.

MR. JONES: We present our reports to the president and the executive vice president in summary, but they go out early in the month. There have been occasions when we got them out on the fourth and fifth working day of the month. The supplementary reports, similar to your Nos. 4 and 9, go out later. The reports to the vice president in charge of manufacturing concerning the operations in the factory go out about the same time. We frequently get our reports out around the seventh or eighth working day. I was inter-

ested in the distinction which Mr. Bechler made this morning between calendar days and working days. We normally get our reports out around the tenth or eleventh of the month, depending on when Sunday falls.

When it comes to the operations in the various departments, we have recently inaugurated a system whereby each operation is budgeted as to number of hours. Actual hours worked on each airplane for each operation are reported. There is a separate group in the vice president's office that follows up the report; that is, on plane No. 137, on operation No. 10, there should be so many hours. If it exceeds the number of hours budgeted, somebody has to tell why. That information goes out pretty shortly after the report comes in from the factory. The information comes in from the factory and the report is written up on tabulating machines daily. Of course, we have rather up-to-date information because our payroll is actually computed by the fourth working day after the close of the week. This report is cross-balanced to give us cost information and payroll information at the same time, so that one day later we have the cost information.

MR. SHARNBORG: I think the discussion goes back again to the type of organization. Where the controller is next in line under top management, he goes to the manager and presents his report. Detailed subsidiary reports are sent down the line, for instance, to the production manager. I will send him a report and he, in turn, will call each department foreman and go over it. Then, if any questions come up requiring more detail or further discussion, we get into it. The same is true with the engineering department and with the sales department. Down the line the reports are given in greater detail and cover less territory.

HOWARD A. GIDDINGS (*Staff, Leach, Rindfleisch & Scott, Richmond, Va.*): I was very much interested in the remarks a while ago about the time of sending in the report. It brought to mind a point presented by a speaker at a recent chapter meeting. This man was the controller of a large concern, with about 28 subsidiaries.

The accounting department was required without fail to send to the management on a certain day each month the principal reports neatly bound in a folder. I assume that if extra reports were needed on special activities, they were given. The requirements as to date

of submitting reports applied irrespective of Saturdays, Sundays or anything else. If these reports are expected by management, for example, at nine o'clock on the morning of the 8th of the month, they are there at nine o'clock on the morning of the 8th of the month. If there should happen to be two Sundays in between, that does not change the time of the report; it simply means the accounting department works overtime in order to meet the schedule, and then to comply with the requirements as to wages and hours, they take time off subsequently.

The time table regularity in submitting these reports, plus the fact that they are "dressed up" by being neatly bound in folders, helps to insure that these reports will be looked for, and will get attention.

CHAIRMAN PERRY: I think there is a great deal to be said for checking our reports to see that they contain the information in such manner that it doesn't take too long to sift it out. I am very much in favor of reports that are nothing more than simple statements of facts or have only a simple comparison in them. We practically have a rule not to go beyond that; this doesn't necessarily reflect on the intelligence of management, either.

MR. CONTANT: Mr. Perry, I heartily agree with that statement. I think the person who makes up a report usually knows a lot more about it than anyone who attempts to read it. I have found that you can stimulate a great deal of interest in the report by highlighting it in a letter with possibly a page or not over a page and a half of comment. You can bring out the highlights and stimulate an interest in that report which, otherwise, they will not take time to read.

THE USE OF CHARTS

CHAIRMAN PERRY: I should like to have some discussion on whether figures or charts are the best methods of presentation. I would like to hear particularly from men who have had experience with charts.

JOSEPH SIEGEL (*Accountant, Standard Statistics Co., New York, N. Y.*): I believe that charts provide a most effective method of presentation; but, for normal monthly reports we generally run into trouble in their use. It is a pretty tough job to make up and revise

a large number of charts every month; it would be quite expensive. For special purposes now and then, or for maintaining charts within the accounting department which management can use whenever they want to, I believe charts are very useful.

MR. BECHLER: It has been my good fortune to serve under five different presidents of our company. We lost three of them by retirement and another one by death. Only one of those men wanted all his figures presented in chart form. The conclusion in my mind is this: if you want to present figures to a group of people, charts generally are the most effective way; for across-the-desk presentation, statements are preferable.

CHAIRMAN PERRY: How about preparing charts for mill foremen?

MR. BECHLER: We have never been successful in presenting charts to mill foremen other than just the production curve or total cost curve.

JESSE G. KLINE (*Accountant, Atlantic Refining Co., Philadelphia, Pa.*): My experience has been that it largely depends on the type of supervisor. We find that recent graduates in engineering want charts and graphs. Older men, without the engineering background, desire the columnar type of presentation. In general we have had the most success in presenting a combination of methods and satisfying all parties.

CHAIRMAN PERRY: I think it might be interesting to have as a matter of record a raising of hands as to how many are using charts for presenting figures to top management. Those who use charts only to present figures to top management, raise their hands. I see only one. A combination of charts and figures. (33) Figures only. (50)

Gentlemen, our time is up. Thank you all very much for your help.

. . . The meeting adjourned at three forty-five o'clock . . .

BASIS FOR EXPENSE ALLOWANCES IN THE FLEXIBLE BUDGET

Chairman: E. E. McCONNELL

Controller, Norton Company,
Worcester, Mass.

CHAIRMAN McCONNELL: It is my understanding that the discussion leader is not expected to deliver a lecture. It is his duty to present a few thoughts for your consideration to serve as the basis for discussion.

While the subject as announced covers only expense allowances, we shall consider during this meeting questions of indirect labor as they are part of overhead. First I am going to discuss briefly the over-all basis for the flexible budget from the viewpoint of the various groups of budgets that we have in our organization, starting with the sales groups.

All of our salesmen are on an incentive plan based on the sales volume, and their expense allowances are on a variable basis. Our district offices and warehouses are also on variable budgets with expense allowances according to the monthly volume of sales in each particular district. The sales organization of our Worcester headquarters is also on a variable budget. Every dollar of sales expense is on a variable basis except compensation of new salesmen or engineers in the field who are in training and have not received their sales quotas, national advertising and motion pictures. All other expenses are directly variable with sales volume.

In our machine division, which produces grinding machines and is a machine tool industry, the entire division is on an allowed-hour basis. There we can measure the production of the departments on the basis of allowed hours as determined by the planning department.

In the manufacturing section of our abrasive division, practically every department is on a variable budget with tonnage, pounds, list value, allowed hours, direct labor, clerical work, or some other method of measurement best suited to each particular department.

When we begin setting up a variable budget for a manufacturing department, we first study our direct labor condition and determine the basic production item for our variable budgets on the basis of the payment of direct labor. We will discuss later some of the individual problems in connection with the various manufacturing departments.

After determining the volume of production or volumes of production to be used (as we may have five or six items in one manufacturing department), we have the problem of simplifying our budget operation so that we can issue our budgets by the 20th of the month. In order to facilitate the computation of budgets, we have weighted the production in each department which has more than one type of production, and that weighting factor is the direct labor cost of the department. In other words, we might have a product in a department that had a direct labor cost of one dollar per thousand and another product with a direct labor cost of two dollars per thousand. We would then weight the two dollar per thousand production at twice as much as the dollar per thousand production in order to get a common denominator for indirect labor and expense allowances and to simplify the computation of the budget.

In establishing our allowances, both for indirect labor and expense allowances in the various budgets, we have attempted, recently, to chart these allowances on a quarterly or annual basis. We might review eight or ten years to get a complete history of the particular expense account and at the same time determine whether or not there have been any changes in the manufacturing operations as shown by the expenditures.

That method of determining our allowances has aided us materially in explaining to the foremen and the supervisors the basic method of securing their allowances at any volume of production. A foreman who has not been educated in accounting procedure has difficulty in following our system of expense allowances by looking at a series of figures. He can see the picture when it is presented on a chart and can visualize it.

We had an experience recently with a works manager in going over a revision of his budget. We had a chart for every labor and expense account. In reviewing the various expenses, it didn't take him very long, where a large loss variance appeared for a particular quarter, to go back in his mind and ascertain the reason for the particular loss variance. He said it would not occur again; it was an abnormal condition during that quarter.

This is a brief outline of our over-all basis allowances for our various budgets.

In specific items, there are three expenditures under indirect labor which have caused us considerable difficulty. We have not solved our problems up to the present time, and I hope that you may be

able to help us in this matter. Our supervision and clerical allowances have worked very satisfactorily over the last five or six years, particularly due to the fact that our foremen are paid on the basis of their budgeted operations. We establish a base and high rate of pay for a foreman, and on the 25th of each month he will be paid what we call adjusted compensation over and above his base pay, based on operations for the previous month. In this manner we are able to control our supervision under normal operating conditions. The defense program has increased work from two to three shifts, and added green help, causing more supervision than in the past, so that we have had considerable difficulty during the last six months in controlling our expenditures for supervision.

We have two other indirect labor expenses that cause us considerable trouble. One is overtime bonus. Up to the present time we have established overtime bonus on a basis of standard equals actual. The operator of the budget cannot sustain a loss or gain variance on overtime premiums. Our reason for reaching that conclusion is due to the fact that the individual foreman or supervisor does not have control over the overtime expenditure in his department. He is advised by the management that he must operate his department forty-four hours or forty-eight hours or fifty hours, regardless of his own judgment in the matter.

Another indirect labor item presenting a problem to us is breaking in labor. Within the last year we have hired a considerable number of new employees, and they are paid a minimum rate per hour regardless of their production. The difference between the minimum rate that we pay them and the actual amount that they earn on the piece-work basis is charged to breaking in labor. Up to the present time, we have allowed the foreman to take a loss variance on this item; we have not put it on a standard equals actual basis.

Then, we have considered the possibility that we might establish an allowance for both of these items at 150 per cent of normal activity, thinking that most of our expenditure for overtime and breaking in will come at a specific point between 150 per cent and a high level of operation. We think that would work very nicely on the up-trend, but what worries us at this particular moment is when to discontinue the allowance for overtime bonus and breaking in labor on a down-trend. Particularly with breaking in labor, we should not continue the allowance when the volume of production decreases in a department. We would not be hiring any new employees. It

would be a question of timing as to when to discontinue the allowance for breaking in labor.

The overtime bonus might possibly work on a downward trend until we reached a point of 150 per cent activity. Those two indirect labor items are giving us considerable trouble from a variable budget viewpoint.

In connection with repairs allowances in all our budgets, we have made repairs a direct variable. The operators of the budget will receive a certain rate per thousand of production, which rate will not vary with the volume of activity. Our allowances are set up on an average rate based on experience in the last eight years. Usually we use eight years as the basis for determining this rate, with the thought that the allowances for repairs and the actual expenditures for repairs should equalize over a cycle of eight years. Of course, in all allowances of that character we have to take into consideration whether or not there have been any changes in the particular department that we are studying.

In our machine division, we have two problems which we have not solved as yet. One is the question of servicing expense. We sell machines and expect to service them in case of any difficulty, such as breakage in transit or the breaking of a part due to the particular pressure of the moment in delivering machine tool products. We have studied many measures in an attempt to ascertain the one best suited for the allowance for servicing expense, such as domestic sales dollars, domestic activity, domestic and foreign activity, and all shop activity. While we recognize that each one in itself is not the perfect measure for this allowance, we are now experimenting with an allowance based on the over-all shop activity.

A similar situation exists in connection with the obsolete material expense. Obsolescence through engineering changes will always be a major item and close contact must be maintained between the engineering department and the planning department. Also, it may be profitable at times to build more parts than are actually needed, due to the cost reductions in making lot quantities. It was finally agreed to make this item a semi-variable expense because it is known that there is a tendency to review inventories for obsolescence during periods of low activity when time is available.

In our abrasive division, which is the wheel manufacturing division, at the time we instituted our original budgets we did not have any rejections in our departmental expense. In 1938 we started to study

our rejections and allocate each rejection to a manufacturing department. We are building up a history on that basis but have not, as yet, except in one or two instances, charged these rejections to the foreman as a part of his departmental expense. We hope, however, when we succeed in getting sufficient information under present-day operating conditions, to charge rejections as a part of his expense and make him responsible for all rejections chargeable to his department.

There has been a lot of discussion as to whether these allowances should be on a straight-line basis or a step-up basis. We have studied that. In our machine division, the original budgets were on a step-up basis, and we have just completed a revision which will change all our machine division budgets to a straight-line basis. That might be a point for discussion in the group as to which method is better for expense allowances and indirect labor.

I think that concludes the introduction of the subject and we might have a discussion on any one phase.

Are there any questions that you would like to ask at this time about sales expense allowances?

SALES EXPENSE ALLOWANCES

FRANCIS E. SWISHER (*Chief Accountant, Dennison Mfg. Co., Framingham, Mass.*): Mr. McConnell, did you say that you had a variable expense budget for warehousing expense in districts?

CHAIRMAN McCONNELL: Yes.

MR. SWISHER: And it is a straight-line variable budget, not a step-up budget with a stand-by charge and a variable allowance?

CHAIRMAN McCONNELL: We have our warehouse expense divided into two classifications—the controllable and the non-controllable. The latter group includes depreciation and fixed charges, repairs to building and state franchise taxes.

We have found during the last five years that it was impossible to hold a district manager responsible for state franchise taxes. For example, in the State of Pennsylvania where the taxes have increased enormously, we felt that we could not hold the district managers at Philadelphia and Pittsburgh responsible for those taxes and charge them with a loss variance, thereby cutting their pay by that loss vari-

ance. All of our office labor, our warehouse labor and our warehouse expenses are treated as directly variable.

MR. SWISHER: Under existing conditions, with a great increase in business, doesn't that tend to give an unearned bonus?

CHAIRMAN McCONNELL: No, it doesn't. I am sorry Mr. Hicks isn't here to talk about the machine division. In our machine tool line, the original budget as set up in 1932-33 established a normal rate of production. We are now operating at 500 per cent of that normal. We have a base level which is approximately a 1932-33 level. Then, we had what we called a Range A point which represented our former high level or the amount that was set up as capacity. On top of the A level, we have B, C and D levels to take care of this great increase in production. As soon as we reach the A point we may slope off certain expenses on a different line, and the same would be true of the B, C and D points.

In our other divisions we are going above our A point, and we have recently installed a B point to take care of the excessive volume under the defense program. Some of our sales expenses are a good illustration. In some of our sales expenses at Worcester we do not allow any more for the B level than we did for the A level because their expenses will not increase. On others, such as salaries, we slope the line off to allow for an increase based on the number of hours and the number of employees that they will need at the B level of operation.

The same is true of our district warehouses. Some expenses go up very slightly at the B level, others might not go up at all, so that we have two lines in connection with this extensive production under the defense program, but our normal operations would be between our base and A point. This larger production may last two or three years, during which time we will use the superimposed B level of operation on top of our A level. Does that answer your question?

MR. SWISHER: Yes. One more question: Salaries may vary with dollar sales and something else may vary with tonnage, is that so?

CHAIRMAN McCONNELL: That is right. Take, for example, our district warehouses. At the present time our office salaries are based on sales, but we are experimenting with orders received, manufactur-

ing checks written and invoices. We are also experimenting with a tonnage basis—the number of pounds handled—for warehouse allowances. That is the way we proceed with all our budgets.

It is a question of installing them and then studying and trying to develop some other method of measurement which is better than the one we are using.

SETTING ALLOWANCES

WILLIAM C. WICHMAN (*Assistant Works Accountant, General Electric Co., Fort Wayne, Ind.*): Mr. McConnell, I gather that you are entirely willing to use any number of bases which are necessary to kill an alibi from the shop that the basis isn't fair.

CHAIRMAN MCCONNELL: Yes, that is true, although it is not so much to kill an alibi, since they don't alibi as much as one would suspect. We are doing it for the purpose of better control. We want them to be able to control the operations in their departments, and if we find that a certain expense attaches itself to a certain product, we use a separate basis for calculating the allowances for that particular expense account.

MR. WICHMAN: Does that raise the cost of keeping the budget? Doesn't it make the cost excessive?

CHAIRMAN MCCONNELL: No, most of the information that we use is already available. Sometimes we have to put in a new classification. When you study it, you find a lot of information available that is not being used.

MR. WICHMAN: Your control is mostly on a weekly basis, isn't it?

CHAIRMAN MCCONNELL: We gather all our labor on a weekly basis and tie in our departmental labor record with our total payroll. Our expenses are on a monthly basis.

MR. WICHMAN: Do you calculate your allowances weekly? For instance, if part of your allowance were on the number of orders placed on the factory, would you actually add those up every week and extend so many dollars of expense per order?

CHAIRMAN McCONNELL: Yes, but on a monthly basis.

MR. WICHMAN: That means, of course, that you have to take under your supervision the actual counting and recording of such data, doesn't it?

CHAIRMAN McCONNELL: Not necessarily. We accept the count of the superintendent or foremen in that department. Many times we find that they already have the information and they have been keeping it for years, but they have not told anyone about it. We will let them submit a weekly or monthly report on their total count of checks or pieces or whatever it might be, and accept it for face value. We think they are all honest until proven otherwise, so that we would accept it for face value.

MR. SWISHER: Do you base these allowances on time studies or entirely on your past history? If based entirely on past history, do you change the allowance from time to time? One of the fundamentals of any piece-work plan or bonus plan is that the piece-work basis or rate should not be changed frequently.

CHAIRMAN McCONNELL: You are referring to our labor policy, is that it?

MR. SWISHER: Yes, so far as the bonus is concerned.

CHAIRMAN McCONNELL: We do not change piece-work rates unless there is some change in the manufacturing operation or in the process.

I would like at this time to introduce Everett M. Hicks, Assistant Controller of the Norton Co., who may be able to explain any questions in connection with the machine division budgets. He has been operating them and has revised them, so that he knows a lot more than I do about them. If you have any questions on the machine division budgets, I know that he would be pleased to answer them.

Incidentally, you might tell them something about time study in the machine division. It is a major factor, isn't it?

EVERETT M. HICKS (*Assistant Controller, Norton Co., Worcester, Mass.*): In the machine division, for our basic chip-making operations, most of our rates are set on basic charts which were installed

about five or six years ago, and by means of which our labor rate is built up in terms of the operation itself. Take a planing operation, for example. We don't ordinarily send a man out to time study each particular job because we have basic charts in our methods department which tell us the speed of the machine and from our knowledge of the piece that is to be machined, we are able to determine approximately how much time will be required to complete the operation. By following this principle, a great deal of time study work is eliminated.

Of course, there are some jobs that require time study, but the majority of our rates are set without actual clock timings for each job.

ALLOWANCE FOR 'SERVICING COST

CHAIRMAN McCONNELL: I referred briefly to servicing expense and obsolete material expense in connection with the budget. I think Mr. Hicks might explain how he reached his conclusions in connection with those two items.

MR. HICKS: Those are the most difficult items we have, so perhaps our conclusions are more open to objection than any other items you might select. Taking the case of what we call servicing, which represents the cost of adjusting any of our machines in the field which do not for any reason perform up to specifications, we try in the first place to classify all expenditures of that nature between sales policy items—which we charge as allowances—and servicing expenses—which we define as something due to a manufacturing fault, either in design or in manufacture.

This leads to some very interesting problems when you have incentives connected with your budget plans. Many times the problem of drawing a line clearly to indicate where sales policy stops and where manufacturing fault begins is rather difficult.

We have solved this problem by having the head of our accounting section in the machine division confer once a month with representatives of the sales, engineering and manufacturing departments. With their knowledge of what has taken place in incurring each one of these expenditures, they are able to classify them. Occasionally they will split a charge because the reason for the expenditure involves both sales policy and manufacturing fault and it is not possible to classify it as one or the other.

We studied the costs of servicing expense over quite a period of time and finally found that by using the manufacturing activity six months prior to the actual incidence of the expense, we were able to get an allowance which worked reasonably well, so that at the present time our allowance for servicing is based on the activity six months prior to the current period.

ROGER M. WAKEMAN (*Cost Accountant, Bullard Co., Bridgeport, Conn.*): Do you use your shipments or some such factor as the direct hours in the shop as a basis for measuring the volume of activity?

MR. HICKS: We use our over-all manufacturing activity which is based on the number of standard hours absorbed in the shop, and is a summation of all the direct departmental hours. Of course, the manufacturing activity precedes shipment. We find our average period of manufacture is three to four months from the date the order is received until the time the goods may be shipped, which accounts for part of the six months. The balance of the six months before servicing comes from the time that you ship it until you finally get any difficulties that may be involved straightened out.

I do not believe that the calculation of the allowance for obsolete material provides a very good illustration for this particular purpose. We have studied this question, and what we have done is to chart our actual expenditures against our activity for the last five or six years. We have established an allowance which we think looks reasonable, although one problem in connection with it is that obsolete material is usually made in periods of very high activity and then thrown away in periods of low activity when there is time to find it. This, of course, is very bad business from a tax point of view.

OBSOLETE STOCK ALLOWANCE

CECIL L. CLARK (*Accountant, Sangamo Electric Co., Springfield, Ill.*): As you mentioned, when times are good, the shop doesn't worry about reporting junk. When things are slack, they start reporting it immediately. In your budget plan, how do you budget for this junk allowance and how do you show it in your statement? Is it a variable expense?

MR. HICKS: That is a very difficult problem to solve. I am not satisfied with the solution that we have reached. Frankly, the solution of the cost of junk, we think, is, in the first place, in not making it, that is, in control of your manufacture and in co-ordination between the engineering and manufacturing departments, so that whenever any engineering change is imminent the planning department will be advised and immediately shut off any production for stock on that particular part.

As to the question of the budget allowance, what we did in that particular case was rather arbitrary. Our history was clouded by periodic programs of reviewing inventories to be sure that we didn't have anything left over at the end of the year, let us say, which didn't constitute what might be considered good inventory. When we tried to put the experience on a chart, we had rather a wild looking picture, so we did in that case what we sometimes do on repair items which are also of a sporadic nature; we took the sum of all the activities for the period which we were studying and the sum of the total actual expense, and by division we set a direct variable allowance for each percentage of activity. Then we arbitrarily modified that because we know that there is a tendency to discard more scrap in periods of low activity than there is in high. We simply bent the line a little bit and figured our formula on that basis.

That may not be a satisfactory solution, but we are going to try it.

MR. CLARK: Frankly, we have the same problem. We have pegged our budget allowance to our direct labor, and have gotten some wide variations because, as you say, in periods of high activity, too large a budget allowance is provided.

MR. HICKS: We are pegged to direct labor, too, using direct labor hours.

MR. CLARK: Do you make a guess at the monthly budget allowance or do you actually make some kind of calculation?

MR. HICKS: We didn't make any formal calculation, although we did chart the actual history. By looking at the points on the chart, we attempted to set a modified line against the direct variable. It

was a purely arbitrary proposition, although guided by our knowledge of our procedure.

PETER H. FLANIGAN, JR. (*Internal Auditor, General Electric Co., Schenectady, N. Y.*): Are you talking about spoiled material, obsolete or inactive material due to engineering changes, or manufacture overruns, or all of the various sources of obsolete material combined?

MR. HICKS: We budget two of those sources of obsolete material together. There is no spoiled work in this calculation. Our spoiled work is analyzed by the department responsible for it and charged to that department. Thus we have a fairly reasonable budgetary control, we think. Our allowances seem to work out pretty well.

MR. FLANIGAN: Whom do you hold responsible for the accumulation of obsolete material, if you have two or three different sources that might be responsible for it?

MR. HICKS: We carry it in a general account which you might term a factory general account, and the various department heads are all conversant with the result. It is pretty hard sometimes to determine the real cause. Put yourself in the position of a person who is studying the inventory. In the first place, he gets the activity of the parts he is studying, and then he finds, for instance, that we have three pieces in the inventory that had been sold or perhaps had been used last year. Shall we throw it away or not? He is bound to keep a lot of things that are probably going to be obsolete eventually.

MR. FLANIGAN: The following year another review will show it is obsolete?

MR. HICKS: If it didn't move again, he would probably throw it away the following year. Then, he will try to go back and see how it happened that these extra pieces were made. Usually it isn't overruns with us because we are making a certain number of parts and it is quite easy to govern how many pieces we manufacture. But I can see that in a business which starts with bulk quantities there might be quite a problem due to overruns. We do have a problem, though, on purchased items where it is very much cheaper to buy a large quantity. While we don't need a large quantity immediately,

it costs so little more than the required number that the quantity is purchased. This has been a source of complaint from the shop when some of the pieces are ultimately scrapped. They claim they did a wise thing to have bought so many, and yet by taking the total number of pieces which they purchased and dividing into the total cost, we get an average unit cost that is used for scrapping the excess pieces, which they claim isn't fair.

RESERVE FOR OBSOLETE MATERIAL

DAVID HIMMELBLAU (*Professor of Accounting,¹ Northwestern University, Chicago, Ill.*): When you set up these allowances for obsolete materials and for materials that might become obsolete, do you keep that allowance open beyond the fiscal year?

MR. HICKS: No, we haven't done that as a practice. It probably would be a good idea.

MR. HIMMELBLAU: If you set up the allowance and don't carry it forward, it becomes a part of the profits again.

MR. HICKS: Of course a budget allowance isn't affecting our profit and loss statement anyway. It is the actual scrapping of obsolete material that is reflected in profit and loss. As far as taxes are concerned, if you don't throw the goods away, there is no point in writing it off.

MR. HIMMELBLAU: I am not thinking of taxes. You are setting up allowances and not using them.

MR. HICKS: We are developing a gain variance which some day is going to be offset by a loss variance unless we have improved our ability to control that particular cost.

MR. HIMMELBLAU: Instead of carrying this as a continuous variance problem, have you ever considered carrying it as a cumulative reserve and charging the losses against that reserve as they are incurred so that you won't have a continuous variance problem?

MR. HICKS: We have discussed that treatment. In fact, no less recently than last week we were talking about it, but to date we haven't thought it worth while.

MR. HIMMELBLAU: That is what I am interested in. Why isn't it better to have the reserve rather than this continuous variance?

MR. HICKS: You have, in the first place, the difficulty of ascertaining a proper amount to reserve. We feel we have taken some steps over the last two or three years that are going to give us fewer losses from that particular source. It is going to take a little time to find that out.

MR. HIMMELBLAU: You have allowed a certain loss as you went along, haven't you? Instead of washing it out as a variance, why not carry it for an indefinite period of time, and if your actual charge-offs come six months or a year later, you have a credit against which to charge them.

MR. HICKS: That is true. However, our cycles tend to be three or four years long, and perhaps this one is going to be longer. We haven't felt that we could forecast the amount of obsolescence with a sufficient degree of accuracy to warrant setting it up as a reserve on our books of account. We have attempted to budget it, but that is something different from actually recording it on the books.

MR. HIMMELBLAU: If it is good enough for a budget, why isn't it good enough for a reserve?

MR. HICKS: I think there is a very definite distinction between those two classifications. If you set up a reserve, you presume to forecast with a reasonable degree of accuracy. We haven't assumed that we can do that as yet. We have never been able to do it.

MR. FLANIGAN: Would you actually be doing that? If you set up a reserve, wouldn't you rather be evaluating the ability of your people to judge whether or not the item was inactive or had become obsolete?

MR. HICKS: That may be so. As I say, we have been considering it and are still considering it as a very definite possibility. So far we haven't been able to find sufficient merit in it to make it worth while. There is no tax advantage to it.

MR. HIMMELBLAU: I don't think much of the budgeting if it isn't good enough for reserve.

MR. HICKS: Do you reserve?

MR. HIMMELBLAU: Yes.

WILLIAM T. BOWKER (*Plant Auditor, The Celotex Corp., New Orleans, La.*): Of what benefit is it to charge a manufacturing department with something that is obsolete and for which they do not have the responsibility? It seems to me that your obsolete material should be a charge to profit and loss, not manufacturing cost. How can you predict it?

MR. HICKS: I think I have covered the second part of your question by acknowledging that we can't predict it with any degree of accuracy. In connection with the first part of your question, I think we have a very definite argument in that the loss from obsolescence is not charged to a direct manufacturing department. It is charged into what you might call a factory general account which covers the miscellaneous items that are left over and which you can't put into direct departmental accounts. In the case of obsolete material, people who are concerned with the factory general account are responsible for this material. Somebody made the decision to make that material. Either it was poor planning in the first place, or the engineers, for some reason, have said that the material must be classed as obsolete. There was a very definite decision on one side or the other which was responsible for that obsolete material, and we feel that it is properly chargeable to an indirect account.

MR. BOWKER: I think I see your point of view there. My problem is slightly different because the obsolete material which we have to dispose of about once a year is usually chargeable to the fancies of the sales department.

MR. HICKS: If it is a style problem, that would be something entirely different. Ours is not. Ours is purely a matter of design or of excess parts which we have no use for.

MR. CLARK: What type of standard cost system do you use in connection with your budget plan? How often do you change your standards? Do you change them once a year or let them go on for a period of three or four years?

MR. HICKS: That is an excellent question. I wanted to ask that one this morning myself, when Mr. Bechler was talking. We haven't changed our basic standards for about five years. We are in the process of changing them right now.

CHAIRMAN MCCONNELL: They are not changed unless there is a major change in manufacturing or a major change in labor costs.

MR. CLARK: Do you feel that the cost of going through the routine of changing more often than that would offset any gain that you might have?

MR. HICKS: Yes. We use an over-all modifying percentage in the interim until we do change.

MR. CLARK: In writing a specification cost or providing a base for a selling price, do you apply this over-all percentage of variation to your standard costs?

MR. HICKS: Yes. We are making several lines of machines but all the same general type of product. The proportions of labor, material and burden are relatively the same, so that we don't feel that the error is too serious.

MR. CLARK: In the valuation of your inventory, do you use this percentage?

MR. HICKS: No, we are charging that off to variance.

ALLOWANCES FOR INSPECTION

ROBERT W. PEDEN (*Supervisor of Standards, Bundy Tubing Co., Detroit, Mich.*): We have two difficult problems—inspection and setup. Would you explain how you handle those in your budget?

MR. HICKS: Setup costs, if I may take that first, are related to direct labor. The number of hours allowed for setup is based on our total over-all hours, so it doesn't present too much of a problem in the machine division. Mr. McConnell may want to comment on it in our abrasive division.

We have a separate inspection department, and our allowance is based on the over-all activity. It works out very well indeed. It is treated as a direct variable, I believe, although I am not absolutely certain of that. It is practically a direct variable, if it isn't wholly. We charge all inspection labor to a single inspection department and base the allowance on the over-all activity.

OSCAR J. HELD (*Chief Clerk, The Lunkenheimer Co., Cincinnati, Ohio*): How do you measure your over-all activity?

MR. HICKS: In terms of standard hours. The over-all is the sum total of all the standard hours worked in all departments, divided by what we consider normal.

ALBERT J. BUCKENMYER (*Assistant Secretary-Treasurer, Surface Combustion Corp., Toledo, Ohio*): Let us take the case of a department where you use as the base the orders received four to six months earlier. In times like these the lag might be seven to eight months, and as business slackens up, the spread might become less. In other words, we have a variable spread of time between the base and when the actual expenses occur later. Have you had any experience with that?

CHAIRMAN McCONNELL: We wouldn't have that in our particular situation because our production is based on the direct labor expenditure and not the orders received. A department can receive a batch of manufacturing orders, but until those orders are put into production, they are not taken into consideration in arriving at volume for our budget allowances.

MR. BUCKENMYER: It does happen in some companies where you have a variable spread. It makes it a little more difficult to handle your allowable budget.

CHAIRMAN McCONNELL: I can see where it might; if your allowances are based on some future work, you would have difficulty. In a case of that type I would attempt to eliminate that as the basis for the allowances.

MR. BUCKENMYER: I am thinking, for instance, of an erecting department where you have work out in the field after your manu-

facturing work, and you have to base your erection allowances on manufacturing activity or something similar.

CHAIRMAN McCONNELL: In that case probably a month would be too short a period to use in comparing actual with your allowance. You might have to take a longer period of two months or three months in order to reach any conclusions as to whether or not the operations were satisfactory. We have a few cases of that type and I will cite an illustration. In our kiln departments we have the direct labor expenditure for setting the kiln at the time the kilns are loaded, but the production won't come out of the kiln until next month. The production will be included in the following month together with the labor for drawing the kilns. If we have a loss variance in our setup labor, we can very easily ascertain whether there were any kilns that were not drawn at the end of the month. If so, they will receive an allowance in the following month covering the labor of the previous month. It wouldn't worry us a bit because over the two months' period it probably would work out satisfactorily as far as our budget allowances are concerned.

MR. PEDEN: May I return to this subject of inspection? I assume from what you have said that you classify inspection as an indirect labor cost.

MR. HICKS: That is correct. As a matter of fact, we have a separate department for it, which is an indirect department.

MR. PEDEN: I assume that you have process inspection and final inspection, that you also have examples of 10 per cent inspection and 100 per cent inspection, and that these various classes of inspection differ in their ratios to the various products that you are manufacturing. May I ask if you would explain why under those circumstances you classify inspection as an indirect cost with a constant ratio to the direct labor hours?

MR. HICKS: We have various forms of inspection. In some cases we have an inspector in the direct department; in other cases we route the parts through a separate inspection department which has no other function, and to complicate the problem a little bit further, we have a great amount of sub-contracting which we have been doing in connec-

tion with the national defense program, all of which has to be inspected. In that case, we have had to make an extra allowance on the budget, because those parts are not in the activity on which the budget is based. But we find that the allowance works very well indeed, as I mentioned before; that is, the actual runs right along with our budget allowance, and has done so for some years. The only explanation that I can offer for what is apparently in your mind is that the proportions of the different types of inspection must be relatively constant on our product.

MR. PEDEN: Then am I to understand that you have separate specific ratios for the different types of inspection?

MR. HICKS: No, we haven't. It is an over-all proposition.

MR. PEDEN: Wouldn't you find, then, that some of your debit and credit variances might be due to some shifting in the assortment of work going through your plant?

MR. HICKS: We get temporary variances on that basis. As an example of that, if our volume is building up and the starting departments which make the parts are increasing rapidly but that volume has not yet been reached in the assembly and erecting departments, we will experience a temporary loss on inspection, but that will iron itself out and we will get a correcting factor on the down side when we go down. It takes care of itself. We have consistently taken the attitude that budgeting is not an exact science and can never be, and that a temporary variance for a single month isn't always significant. If it is called to the attention of the head of the department and he isn't able to correct it, we must find out what the trouble is. But very often we will have a temporary variance one way and then a small one the other way. That is not so true on an item like inspection labor as it is on accounts like miscellaneous expense in which there will be a big charge in one month causing a big loss variance, and then there won't be any more for several months. These things iron out over a quarter period.

MR. FLANIGAN: Mr. Hicks, I would like to know your attitude with regard to changing conditions in a department which had several different types of work and in which you had your inspection budget set. If your up-grade happened to be in a classification or a type of

part that required 100 per cent inspection, you say that normally you will go into the red on the up-grade, but that you will catch up on the down-grade. Suppose you had a peak in business due to an increase in the 100 per cent inspection group of parts and there was no corresponding increase in the remaining portion of your department operations which had, say, 50 per cent or only 10 per cent inspection. What sort of an allowance would you make?

MR. HICKS: I would do one of two things. The first thing I would do would be to find out whether this was going to be a permanent change and whether we were likely to have the composition of our production change further. If I found it to be a permanent change and likely to shift from time to time, I think we would have to attempt to determine more accurately than before what causes the inspection allowance to vary, much along the lines which Mr. McConnell mentioned a few minutes ago. We would have to use more than one unit as a measuring stick for that particular function.

MR. FLANIGAN: We have a point where that very condition exists now. We have a peak load in a parts department, and it looks as if the peak in that department is all going to be on 100 per cent inspection work, which throws it out of our regular category.

MR. HICKS: As I said, we haven't had to face that.

CHAIRMAN McCONNELL: Probably you would want to set up a separate production item for that department with a separate labor allowance.

MR. FLANIGAN: We are attempting to find a proper basis.

CHAIRMAN McCONNELL: That is probably what we would do; if we found it was a permanent condition we would attempt to segregate it from other inspection costs.

MR. FLANIGAN: We don't want to distort our normal budget because we expect this department to revert to its former status at some later date.

MR. HICKS: In that case, you might handle it through a special allowance.

DETERMINING REASONS FOR VARIANCES

CHAIRMAN McCONNELL: Let me say here that we are not particularly disturbed by loss variances. Our main thought is to ascertain why we have a loss variance, who is responsible for it, and whether or not it is continuing. If it is a temporary thing, it might run along two or three months without any comment from our department. If it is due to a change in procedure, we revise our budget, probably through a special allowance to meet that particular condition. It is the cause of the variance that gives the most trouble. We have many variances on which we can satisfy ourselves. Possibly there is a changed operating condition, and we haven't adjusted our budget accordingly. The responsibility in this case is that of the controller's department and not of the individual who is operating under the budget.

MR. CLARK: In ascertaining the reason for a labor variance, how much detailed work do you do?

CHAIRMAN McCONNELL: That depends on the amount of the loss variance. Each month we examine every budget which shows any abnormal loss variances. We go all the way to find the cause for the loss variance.

MR. CLARK: Do you do that after you issue your budget reports, or do you try to ascertain the cause of the variance before you get out your reports?

CHAIRMAN McCONNELL: We do it after the reports are issued, for the simple reason that we have a deadline for our budget reports. All of our budget reports must be completed on the 20th of the month because we pay the men on the 25th, making it necessary that we turn over this information to the cashier's department or the payroll department in time for the computation for payment to be made prior to the 25th. However, in cases of special allowance, the allowance is made at the time we prepare the budget, usually on the written request of the operator of the individual budget. We have advance notice in that case that there are some abnormal conditions.

THEODORE J. BREAK (*Cost Accountant, Bundy Tubing Co., Detroit, Mich.*): Are your budget allowances tied in in any way with

the standard burden rates, so that you can use them to calculate the gain or loss due to volume?

MR. HICKS: The standard burden rate which we use for costing is the cost per allowed hour at normal activity. By extending the total number of allowed hours of work performed in any given department for the month at this rate, we get the total burden absorbed. By comparing this figure with the total budget allowance, we get the amount of variance due to volume. We make that analysis for every department every month.

PRESENTATION OF BUDGET REPORTS

ARTHUR M. MANWEILER (*Cost Accountant, American Meter Co., Inc., Albany, N. Y.*): Do you submit monthly budget reports to your supervisors? In other words, do they have an opportunity to go over these reports to determine which accounts are out of line, and to what extent? Also, do you hold monthly meetings with the supervisors to discuss all phases of the budget?

CHAIRMAN McCONNELL: In our factory organization we have a group of superintendents each of whom has from four to six or eight departments under his supervision. We submit all budget reports to the superintendents for their review. They, in turn, discuss the reports with each foreman and make any comments to the foreman which they think are needed. The superintendents have the budgets for review every month on the 25th. The foremen get them within a day or two after that. It is the primary responsibility of the superintendents to operate the budgets successfully, and it is up to them to put the pressure on the foreman. We, in our department, may talk with the superintendent or with the foreman if we feel that we can assist them in the operation of the budget.

In the installation of our budgets, we submitted to the foreman every figure and every chart that we had and reviewed the allowances with him to make sure that the allowances which we were providing were satisfactory from his standpoint. If at that time he thought that our past experience was not the correct basis for the allowances, he had an opportunity to tell us why he should have some other allowance than the one based on past experience. When a budget is put in operation or any revision is made, the foreman and

superintendent are absolutely in agreement with us that the allowance is sufficient to operate the department. In that way we obviate a lot of discussion and a lot of alibis on budget allowances as far as the departments are concerned.

In our abrasive division we have 61 departmental budget books and 45 men who are interested in these budgets. The expenditures are all reviewed by the foremen and the superintendents before they are made, and this has been an excellent thing from our standpoint. It has reduced the amount of work that we have to do in the controller's department in connection with the control of expenses.

It is surprising the way these foremen can pick up allowances. We have many of them who can tell just how much allowance they have for each item based on the production.

We had a very interesting experience in 1938, at which time our volume of production dropped materially within one year. It was the largest drop in production we have ever had within such a short period of time. We discovered that the foremen were anticipating the work that would go through their department and were cutting down in anticipation of a reduction in volume. Many of them operated with gain variances, even under those conditions, which was very satisfactory from the controller's standpoint. In the departments that were not on a variable budget, we had to spend many nights studying their past history and telling them to reduce the number of employees in their department, indicating the required reduction. The average supervisor does not like to discharge men. He is always anticipating that business will pick up and he can retain his organization.

CHESTER A. ROSENBERGER (*Superintendent of Administrative Division, The S. S. White Dental Mfg. Co., New York, N. Y.*): You said you had a bothersome item in controlling the cost of servicing machines after shipment due to difficulties arising from either manufacturing or design faults. Is the design department under the jurisdiction of the machine division?

MR. HICKS: Yes.

MR. ROSENBERGER: If it were separated from the machine division would you make an effort to separate the servicing expenses between those due to faulty design and those due to manufacturing defects?

MR. HICKS: I think we would have to split the cost three ways, instead of two.

EDWARD P. GILLANE (*Works Accountant, Underwood Elliott Fisher Co., Hartford, Conn.*): I understood you to say that you based all the budgets on past experience and you checked for about eight years. Is that correct?

CHAIRMAN McCONNELL: That is right.

MR. GILLANE: If you base it entirely on past experience, isn't it a fact that some foremen may have had excessive expenditures for a number of past years, and may have had too high an allowance as a result. Such a foreman would still be able to meet the budget, even with a decline in volume. He might make a fine showing, but the fact that the expense allowance was based on past experience rather than on a scientific study of allowable expense, would allow him to continue to coast, as long as he adjusted his expenses to the volume of activity.

CHAIRMAN McCONNELL: That might be true. When I say past experience, I don't mean that that is the only thing that we take into consideration. We have to take other conditions into consideration. We couldn't set up a budget and say, "This is just based on past experience alone." We have had the reverse occur, too. We have put in a budget based on past experience and the foreman was continuously in the red in the department. When we removed the foreman and put in a younger foreman he operated with gain variances on the same allowances. I don't think you can rely 100 per cent on past experience, but it is a guiding factor in the determination of your allowances.

MR. GILLANE: That was the point I wanted to bring out.

CHAIRMAN McCONNELL: Particularly these days you have a continually changing condition that should be reflected in your budgets, if they are going to be worth while. We have one budget which we have discontinued within the last month, due to the fact that so far this year there have been eleven operating changes in that particular

section and seven or eight more are anticipated during the remainder of the year due to the high volume of activity.

MR. GILLANE: Do you discontinue the bonus payments on that plan when you discontinue the budget?

CHAIRMAN McCONNELL: We do, if they are related to the budget plan. We would make some satisfactory temporary arrangement with the employees who were working under the budget until such a time as either we set some basis for this high operating level on which we might establish a budget, or we return to our normal cycle of activity. With eighteen or twenty changes within a year, it is almost impossible to operate a variable budget. The changes take place too rapidly.

RELATION TO STANDARD COSTS

I. WAYNE KELLER (*Chief Accountant, Armstrong Cork Co., Lancaster, Pa.*): Returning to this idea of the relationship of your standard cost to your budget allowance, I believe Mr. Hicks stated that it is possible to determine the variance due to volume. I gather, then, that the budget allowances are not based on the same standards that are used in determining the volume variance. Is that true?

MR. HICKS: Your standard, of course, is your cost rate at normal activity. If you attempted to set budgets on the basis of the standard amount absorbed, it would result in your having every item a direct variable. That is what it boils down to, and our budgets are not set on that basis. We attempt to allow for the fixed and semi-fixed elements in the actual cost.

MR. KELLER: That is true. I recognize that fact, but back of my question is the problem that we are having in our company right now. We are attempting to tie up the volume variance and the spending variance determined from the budget allowances, so that if you add the two you have the sum total of your unabsorbed burden. Therefore we are using the same lump sum fixed for budget purposes as we are using for our expense standards, and are using the same variable rate per unit of production for budget allowance as we are using for burden absorption. We are having difficulty with it.

MR. HICKS: If I understand you correctly—I am not sure that I do—you have divided all of your expenses and classed them either as direct variables or wholly fixed for budget purposes.

MR. KELLER: We have mixed items. For example, on indirect labor we may determine that for an operation our fixed is \$500 a month, and our variable \$2 per thousand units of production. We have a combined factor there for determining the total budgeted amount for indirect labor.

MR. HICKS: That is very similar to the method that we follow, but unless our mathematics are wrong, the total variance can be readily divided between volume and what we call controllable variance by simply deducting the total budget allowance from a total absorbed, at the standard rates, which gives the volume portion of the total variance. The only qualification that I would make is that where you have revised your budget allowances without revising your standard burden rates, you must introduce still another factor, which is the amount by which you have either increased or decreased your budgets. The three of those together will make up your total variance.

MR. KELLER: That is true if you base your budget on production volume. Previously, we didn't allow entirely on a production basis. We had some budget allowances, for example, on actual direct labor hours, which injected a yield factor into the variance. I gather that you base your budget allowance entirely on production volume.

MR. HICKS: Yes, our measure of production is the standard hours absorbed; it isn't the actual hours, so we have a complete tie-in.

MR. KELLER: That is right. If you use the standard hours, they will tie in. It works satisfactorily in your case?

MR. HICKS: Yes, it does.

MR. KELLER: That is encouraging.

INSPECTION AS DIRECT OR INDIRECT LABOR

MR. GILLANE: Mr. McConnell, it was brought out previously that inspection was classified as indirect labor. I would be very much in-

terested in a showing of hands among those present as to how many would classify inspection as direct and how many as indirect labor.

CHAIRMAN McCONNELL: Let's have the hands of those who handle it as direct labor. (24) Those that handle it as indirect labor. (35)

MR. GILLANE: It might be well if you would ask about it both ways. Some may classify 100 per cent inspection as direct labor, and classify the 10 per cent inspection as indirect labor. One hundred per cent inspection might be classified by some as direct labor and by others as indirect. You may have some here who would charge it both ways.

CHAIRMAN McCONNELL: How many charge it both ways? (23)

MR. HICKS: I gathered, from the question put by Mr. Peden a little while ago, that he had some very definite problem in mind on the classification of inspection. I was wondering if he would like to outline his problem for the benefit of everyone here?

MR. PEDEN: My present duties include trying to determine what is a day's work in our plant. We have day work throughout and a contract with a local CIO union. One of our large items of labor cost is inspection. We are manufacturing steel tubes. There is a great difference in the amount of inspection required for these different classes of tubes, and we have found by experience that it is better to classify that labor as direct labor.

MR. HICKS: I can see in your case where that would be a very definite advantage.

MR. PEDEN: Some of our tubes are fabricated, some are shipped in mill lengths or straight lengths. Some of these tubes which go into the refrigeration industry require a great deal of inspection, and in order to obtain accurate costs we must allocate these hours according to the types and classes of products.

CHAIRMAN McCONNELL: I think we are about due to close this discussion. It has been a pleasure to be here, and I hope that we have mutually benefited from this discussion group.

∴ The meeting adjourned at three thirty-five o'clock . . .

ANALYSIS AND DISPOSITION OF VARIANCES FROM STANDARD COSTS

Chairman: EARL A. GREEN

Chief Auditor, Armstrong Cork Co.,
Lancaster, Pennsylvania

CHAIRMAN GREEN: Our subject for discussion this afternoon is the "Analysis and Disposition of Variances from Standard Costs." I believe all of you have a copy of the outline which we are going to endeavor to follow.

I have found that while standard costs have been in use for a good many years, and you might say in particularly widespread use during the last five years, there still exists a variety of contradictory opinions as to the proper place of standard costs in industrial accounting today. However, I believe that the majority of you will agree with me that it is quite generally accepted at the moment that standard costs are particularly suited for the measurement of operating efficiency.

I therefore feel that we can congratulate our Technical Program Committee on the choice of so timely a subject, and that we can well afford to devote our time here this afternoon to its discussion. I do not feel that it is too much to hope for that at the conclusion of this session, sufficient ideas and experiences will have been unfolded before us to clear our individual thinking on this subject and permit the formulation of methods for the analysis and disposition of variances from standard costs, if not in a general fashion, perhaps according to broad sets of conditions.

I believe that your attendance at this session denotes your interest in the subject and that you are willing to participate freely in the discussion either by raising or answering questions. I am sure much benefit will accrue to all of us thereby, particularly in view of the wide diversification of industry and actual experience with standard cost which is represented by this group.

Past experience in these group discussions at our conventions has indicated that a brief outline of the area to be covered serves to stimulate thinking on the subject, helps to limit the discussion to the

indicated area, and at the same time, permits an organized statement of the relation of sub-topics to the main topics. I trust that the outline with which you have been furnished will serve in this fashion. Perhaps you may find that the outline is not complete. If so, feel perfectly free to add to it as you see fit.

Now, let us turn to the outline. We should endeavor, so far as possible, to take up the sequence of topics, by raising and answering questions thereon, as we go along. If you feel that we are spending too much time on any one of these sub-topics, either under the analysis of variances or on the disposition of variances, we can pass over to the next topic. I think, however, that the interest shown in each of the various sub-topics will determine the length of time devoted to it.

You will note that the outline which we have prepared for this discussion is divided into two main divisions of the general subject: (a) the analysis of variances, and (b) the disposition of variances. Accordingly, let us start with the analysis of variances and consider sub-topic 1 under that main heading: "Who is responsible for the preparation of variance reports—the budget department, the cost department, or, in your particular business, some other department?"

I would like to have someone start the ball rolling either by raising a further question on this topic or by answering it, so that we can get the benefit of the broad experience which is represented here today. Please feel free to give us your experience so that we can really get something out of this session and find out what the other fellow is doing, and what the general method of operation and procedure is in the various businesses of the country. When we leave here this afternoon, we want the benefit of something that you gentlemen have to offer, something which is perhaps better than we have in our own companies. Who will start off with a question on this particular subject, or an answer?

DISCUSSION OUTLINE

**ANALYSIS AND DISPOSITION OF VARIANCES
FROM STANDARD COSTS****I. ANALYSIS OF VARIANCES**

1. Who is responsible for the preparation of variance reports—
 - (a) The budget department?
 - (b) The cost department?
2. What types of variances are set forth on the variance reports—
 - (a) Purchase variance?
 - (b) Material utilization variance?
 - (c) Direct labor variance?
 - (d) Manufacturing burden variances?
 - (e) Other variances?
3. How fine is the breakdown on the variance reports—
 - (a) By departments?
 - (b) By operations?
 - (c) By commodities?
 - (d) By machine groups?
 - (e) Other methods?
4. Are variance reports for major executives more condensed than those submitted to factory managers, department heads or foremen?
5. Does the plant manager or departmental head review the variance reports with the various foremen, gang leaders, or other key men under his responsibility?
6. What steps have been taken to facilitate the analysis of variances, for example—
 - (a) Are records so designed, tabulated, summarized, and filed in the accounting department as to expedite the analysis of operations for the period under review?
 - (b) Does the record system in the factory facilitate the analysis of operations?
 - (c) Has the production department been trained to work closely with the accounting and budget departments in the analysis of variances or is it more of a matter of procedure of the moment?
7. Do the foremen, section heads, gang leaders, or other supervisors keep records of their own to assist in the analysis of their variances?
8. How frequently are variance reports issued and how promptly after the facts? Are they given immediate attention and action?
9. What is the attitude of the management toward the analysis of variance and does the situation really tend to the control of results of operations?

II. DISPOSITION OF VARIANCES

1. When are the variance accounts closed into the cost of operations—
 - (a) As they occur, for example, monthly?
 - (b) Semi-annually or annually?

- (c) As the goods are produced?
 - (d) As the goods are sold?
 - 2. What is the procedure involved in releasing variances into the cost of operations if methods 1-c and 1-d are employed?
 - 3. What short-cut methods do you use in connection with the procedure referred to in 2 that insure a sufficient degree of accuracy for all practical purposes?
 - 4. Is more than one method used within the same business due to diversification of circumstances?
 - 5. In charging variances into the cost of operations, what effort is made to allocate variances to major commodity groupings for the purpose of determining commodity profit and loss?
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RESPONSIBILITY FOR PREPARATION OF BUDGET REPORTS

JOHN WEPPLER (*Labor Supervisor, American Can Co., New York, N. Y.*): Mr. Chairman, the budget department is usually responsible for variances in operating expenses, and the cost department for variances in manufacturing costs. The responsibility is divided.

CHAIRMAN GREEN: I get from your remarks that the cost department has the responsibility for reporting material and labor variances and for their analysis. Is that what you mean by the breakdown of responsibility?

MR. WEPPLER: That is right.

CHAIRMAN GREEN: Do we feel, as a group this afternoon, that that is the general practice, or do we have other sets of conditions or other sets of procedures which differ widely from that? Will someone else give us the benefit of his experience on that particular sub-topic?

JOSEPH A. PETRICK (*Cost Accountant, Kellogg Switchboard & Supply Co., Chicago, Ill.*): In talking about the analysis of variances, are we talking about the cost variances or all variances from a budget report?

CHAIRMAN GREEN: We are talking about all variances from standards, whether they be standards for material, direct labor or the manufacturing burden. I do not know whether it is the will of

the group here this afternoon to go into the variances from selling standards or commercial burden or general administrative standards. We can widen our discussion to include those particular components of cost, if you wish. However, I imagine that possibly the majority of our discussion will be limited to material, direct labor and burden variances, although, of course, that need not necessarily hold true. Does that answer your question?

MR. PETRICK: I just wanted to make that clear for the purpose of the discussion.

CHAIRMAN GREEN: That's right, and I think it was a very good question. We are here to discuss the analysis of variances from standard costs, whether they be standards for material, labor or burden.

We have had one expression of opinion as to whose responsibility it is to analyze these variances. How does that fit in with the majority view of the gentlemen present? I wonder if we could have another point of view?

JOHN H. NAGLE (*Assistant Treasurer, Muehlhausen Spring Corp., Logansport, Ind.*): There are quite a number of industries represented here that do not have a budget department. Therefore, in a great many cases, the cost department not only analyzes, but discusses the causes and possible methods of correction with the people responsible for the variances. This situation applies in our case.

CHAIRMAN GREEN: I think that would be particularly true of smaller companies, where your organization is not big enough to support both a budget department and a cost department.

CLAUDE Y. BARTO (*Cost Accountant, Keystone Watch Case Corp., Riverside, N. J.*): I can confirm what the previous speaker has said, because that is the experience of our company. We are directly responsible to the management for the variances. We have no budget department.

CHAIRMAN GREEN: In your case, then, you would state that it is the cost department's responsibility to analyze and report back all variances?

MR. BARTO: That is right.

EDW. WM. KRUEGER (*Partner, Walton, Joplin, Langer & Co., Chicago, Ill.*): I think that in discussing this subject, a good deal depends on how your system is set up. Naturally, if the cost department compiles variance reports daily, that is the logical department to submit them to management. Why should the budget department handle them? They would have to gather the information all over again. If they make the final summaries, if that is what is meant, that is a different story. But I think to a large extent, the question is answered by determining how the variances are compiled. From my experience, most of it comes through the cost department, but further analysis may be made in the budget department.

CHAIRMAN GREEN: I believe that is very largely true, and therefore we have to watch for duplication of effort as between the cost department and the budget department? We may have a situation in some companies wherein the cost department prepares the variances and does the analytical work, but turns them over to the budget department for review with management. Do we have any situations like that represented here?

I wonder if we could get a consensus of opinion here as to whether in companies of moderate size and with both a cost and a budget department it is the responsibility of the cost department, or the budget department, to prepare variances for management. Could we have a show of hands on that? Who would favor the cost department reporting those variances? (The majority) Who would favor the budget department? (2) It seems as though the budget group is largely outnumbered. Could we have some clarifying remarks from one of the gentlemen who favor the budget department assuming that responsibility?

WILLIAM H. SLAVIN (*Controller, Hanson-Van Winkle-Munning Co., Matawan, N. J.*): In the question as put to us—that is: Who is responsible for presenting these variances—I voted that it was the budget department's responsibility. The cost department compiles and summarizes the variances and turns them over to the budget department, which actually makes up the budget report and

presents them to management. That is why I voted that it was the budget department's responsibility to present these variances.

CHAIRMAN GREEN: Perhaps we have not stated the question clearly. Do we agree on this, that it is the cost department's function to determine these variances, and to make the analysis of those variances, but to turn in their data, their record finding, to the budget department for presentation to management? We have two parts: first, the matter of preparation, and second, the matter of presentation. Now, what is the consensus of opinion on the preparation of the variances? Is it the function of the cost department? How many would agree with that? (The majority) How many disagree? (None) Well, it seems to be unanimously agreed that it is the function of the cost department to prepare the variances.

Now, as to the presentation of those variances, whose function is that? Raise your hands if you believe it is the function of the cost department. Who favors the presentation of the variances by the budget department, if they have a budget department? The opinion seems to be slightly in favor of the cost department presenting the variances. But isn't it true, that it would depend largely on the type of organization and whether you have both departments in your organization? If you do not, as in the smaller company, it is obvious that it is the cost department's function to prepare and present the variances to the management.

ROBERT D. JOY (*Accountant, American Hosiery, Inc., New Britain, Conn.*): I would appreciate a show of hands to indicate the number of companies represented here that are large enough to have a budget department.

CHAIRMAN GREEN: All right, let's have a show of hands on this gentleman's question. (About 15 to 20.)

W. L. HEWITT (*Works Accountant's Staff, General Electric Co., Schenectady, N. Y.*): I can state that in the larger companies, such as the General Electric Co., we do have a budget department, but the budget department operation is confined to the indirect manufacturing expense, that is, burden, and their function does not enter

into the compiling of costs inasmuch as we use normal overhead rates. The analysis of the over- or under-realization of the budget is more or less physical and for control purposes, and the use of the normal overhead rate by the cost department, naturally, eliminates the budget department from entering into the reporting or preparation of any reports on the cost variances.

CHAIRMAN GREEN: I imagine you would have a similar setup in quite a few of the larger organizations.

R. F. BEAVEN (*Factory Accountant, The Mengel Co., Louisville, Ky.*): I think the cost department is solely responsible for preparing and presenting variances, and it is up to the budget department to defend themselves.

CHAIRMAN GREEN: Well, there's a new angle. Who disagrees with that?

CLINTON J. NORRIS (*Chief Cost Accountant, Intertype Corp., Brooklyn, N. Y.*): It appears that we are getting into an argument between the budget department and the cost department, so naturally I am going to stick with the cost men.

One or the other is going to be a functioning division in any organization. One is going to be statistical, depending entirely on how big your organization happens to be. In my company they are combined. The moment you set up separate budget and cost departments, you make one subsidiary to the other.

TYPES OF VARIANCES

ROBERT J. WILLIAMS (*Cost Accountant, R. Wallace Mfg. Co., Wallingford, Conn.*): I suggest that we go on with the other questions. I don't think it makes much difference who prepares these variances, as long as they are prepared accurately.

CHAIRMAN GREEN: Perhaps that is one way of preventing bloodshed.

Turning to Question 2: What types of variances are set forth on the variance reports—purchase variance, material variance, direct labor

variance, manufacturing burden variance, and perhaps other types of variance, such as scrap? We should be able to work up quite a few points of discussion on this problem. What variances are important enough to be shown in your variance reports?

L. W. CORBETT (*Chief Cost Accountant, Frederick Stearns & Co., Detroit, Mich.*): I believe that before we were concerned with the defense program, the material variances were a considerable factor, but now, with rising markets and the necessity for changing your standard material costs more often than under normal conditions, I would say that this is possibly becoming a still more important factor than the variation in direct labor. At least, that is true in our industry.

CHAIRMAN GREEN: That is generally true, I believe, in most industries.

MR. HEWITT: I will take exception to that. It depends a great deal upon the type of product that you are manufacturing and whether you are manufacturing from elementary materials or whether you are starting off with parts that have already been manufactured by some other concern, and which you are assembling. If you are starting from elementary materials, then your material variance becomes significant as compared with your labor variance.

CHAIRMAN GREEN: That is right. If you are in an equipment business or some sort of business where you are using a great multitude of sub-assemblies, your labor cost may become a larger component of factory cost than material cost. It might be true in a watch factory or a similar industry.

MR. BEAVEN: There should also be a distinction by products and by raw materials. Mr. Hewitt's company may manufacture from metal, while we manufacture from wood. Wood is fifty per cent or more of our entire product cost, so it is a very important item.

MR. CORBETT: In our particular industry, a lot of raw materials are, or were, imported from foreign countries, and the problem now isn't the small matter with respect to the variance in cost. In fact, it is a question of whether or not you can get the material at all.

That has become a vital factor in the pharmaceutical industry and I think also in the chemical industry.

MR. HEWITT: Perhaps I did not state my point clearly, but I concur in the opinion that in order to get a clear statement of this question, we must know what the manufacturer's balance is between the material and labor; that is, the proportion of each to total costs.

CHAIRMAN GREEN: Correct. Isn't it true that we have two parts to our total material variance? We have the part that has to do with price, which, of course, is the one that is facing us most vividly at the moment, and then we have the other portion of that variance, which is the variation due to utilization, whether you are using more or less material in manufacturing than your standards provide for. The last item should not be affected by the economic situation or any other situation arising at the moment, but your price situation will be. Therefore, don't we want both those variances set out in the variance report?

We have talked about material. What other types of variances do we want in the variance report? Let's have some light on that subject.

ELMER LUCE (*Mill Controller, Sidney Blumenthal & Co., Inc., Shelton, Conn.*): Mr. Chairman, before we go into that, I wonder whether it would be of interest to those present to have a showing of hands to determine how many people here actually use a standard price for the material, and how many use the actual cost? That is "A." Now, "B," of those who use standard prices, how many apply a standard price on the debit side of their inventory, and how many use it on the credit side of the inventory?

CHAIRMAN GREEN: I would like a show of hands on those two questions, which I think are very good ones, and it would be well to get a cross-section of experience here. First of all, in the matter of price, those of you who use standard prices for your materials, will you kindly raise your hands? (About 40) Now, those who use actual rates for material count? (About 15) It seems that there are considerably more firms using standard rates than there are using actual rates.

How many of you use the standard material costs to build up your inventory, that is, to debit your inventory? This is for both finished products and in process. (About 30) How many use actual rates to debit your inventory? (4) It seems that the use of standards largely outnumbers the use of actual rates in the debiting of inventory.

Now, in liquidating the inventory into the cost of sales, as well as liquidating work in process into finished stock, how many use the standard rate to credit the inventory account? (About 30) About the same number as use the debit side. How many use the actual to liquidate the inventory count? (4) That is largely as it should be, because if you are using standards to build up inventory, you should be using standards to liquidate it; while, on the other hand, if you are using actuals to build up the inventory, you should use actuals to liquidate the work in process or finished stock. Does that answer your question?

MR. LUCE: Yes, thank you.

CHAIRMAN GREEN: I don't think we have covered the full scope of this question, and before we pass along to point No. 3, will someone express an opinion as to the types of variances shown in these variance reports? No one has really answered that yet, and it is the fundamental question with which we started.

MR. NORRIS: We use the standard variance for purchases, we use the standard variance for direct labor and we use the standard variance for overhead. We are using standard rates of overhead, carrying overhead into the process account at standard, and charging the difference between standard and actual at standard rate to profit and loss. That is our practice.

CHAIRMAN GREEN: You don't break down the material into price variance and utilization variance? You have them all in one?

MR. NORRIS: We take care of the price variance when the raw material is received. Later on, we take care of the direct labor variance and, naturally, the overhead at the same time, but we record the material variance at the time of purchase.

CHAIRMAN GREEN: That is very interesting. Let's take an example to illustrate the point. Suppose you purchased a thousand units at \$1.10 a unit, and your standard purchase rate was a dollar a unit. When you put those thousand units into your inventory, you would put them in at a dollar a unit and you would have a purchase variance there of ten cents a unit. Now, suppose that in the month ensuing, you used those thousand units in production. Those thousand units should normally yield a hundred units of finished product, but they yielded only ninety. You have an overrun there. You have used more material than you should have in creating those ninety units. Don't you show that variance as a material variance?

MR. NORRIS: No, that is included in the production variance.

CHAIRMAN GREEN: How many gentlemen here break down their variances into price variance and utilization variance? (About 35) It seems that the majority of us do make that division.

In addition to our material variances, do most of us have a labor variance, and perhaps a scrap variance, in addition to the burden variance? Could we have somebody else relate his experience on that?

CARL H. GRASHOF (*Controller's Office, Eastman Kodak Co., Rochester, N. Y.*): We follow the very obvious practice of analyzing our variances by those various categories that are of importance in the operation under consideration, rather than trying to stick to any one series of breakdowns. In certain cases we would have a material price variance, a material usage variance, and in some chemical operations, a yield variance. This makes three material variations. Variations in other elements of cost, in certain cases, are important enough to be broken down into three or four different categories. Generally, we segregate our variation caused by volume of production, and also waste if it is important. In other words, we set out separately the important causes of cost variance and squeeze together into summaries those items which are not important.

BREAKDOWN OF VARIANCES

CHAIRMAN GREEN: Suppose we proceed to Question 3. How fine is the breakdown on the variance report? That should bring

out some interesting comments. Do we break it down by department, or do we go still further into operation? When we break it down finer than that, into an assembly or a gang, do we break it down by commodities or by machine groups? How do we set these variances out on the reports in the various industries represented here today?

MR. BEAVEN: We break our burden down departmentally and also break it down into volume variance and variable variance.

CHAIRMAN GREEN: You don't have a price variance?

MR. BEAVEN: Not on expense, no.

CHAIRMAN GREEN: How do the rest of you gentlemen handle your variances? Do you summarize them or do you break them down to department or operation?

MR. PETRICK: We break down our labor variance into two major groups. One, the variance due to the efficiency of the employees, and the other the variance due to the difference between actual labor rates and the standard labor rates.

CHAIRMAN GREEN: We still have not answered the question. Does your breakdown go further than an analysis of a department, say to operations within that department, and perhaps even further in some cases? Will somebody tell us their experience along those lines?

MR. BARTO: I would like to tell you about our experience. For material, we do not endeavor to break it down by departments or by operations, but we have a very strict analysis of labor because we can get that from our payroll distribution. The payroll is split up into the various cost accounts—direct labor, indirect labor, repair work, etc. For that reason, we are able to break it down readily by departments. We pick out the outstanding loss factors in the course of a month, so that we can spot anything that is rather unusual in the processing of our product.

CHAIRMAN GREEN: Are there any industries represented here that go beyond the departmental basis in presenting their variances on the report?

MR. HEWITT: We go beyond departmental breakdowns for labor. On some labor, we will go down as far as operations. Generally, we go down as far as machine groups, that is, report the labor variance by foremen. But so far as the purchase variance is concerned, there is no breakdown. The purchasing department is a department in itself. They do the purchasing and the variance occurs more or less under their control. If a report of purchasing variances were to be made, they would make the report. Of course, that would then apply to the company as a whole. However, we have the manufacturing department so set up that each department is an organization in itself and has its own cost organization. Therefore, the labor variances are broken down in great detail in those departments and reported in such detail. Again, it is a question of doing it in the most expedient way, where it will do the most good.

CHAIRMAN GREEN: Thank you. I wonder if Mr. Patterson would be willing to tell us how the variances are reported for the Armstrong Cork Company. Are they on the basis of operations rather than by departments?

THOMAS H. PATTERSON (*Chief Cost Accountant, Armstrong Cork Co., Lancaster, Pa.*): In our company we publish reports that are submitted to the superintendent, the assistant superintendent, the foreman, and the gang leader, depending upon the organization. We try to keep the report as simple as possible and these reports will cover material, labor and variable expense deviation. We see to it that the individual men responsible for expending the labor, material or expense get a copy of that portion of the deviation that applies to them. Taking material variances as an example, we will show in one operation the standard allowed, the actual cost, the deviation and the per cent deviation for the month, together with the period-to-date figure beginning with January 1 and ending with the twelve-month period. Usually the operation total includes a number of different products and if the standard and the actual are in close balance, no explanation is offered. However, if they show a sizable deviation, we will make a further analysis showing on what products such deviations have occurred.

It has worked out satisfactorily. The foremen, of course, keep their own control as they go along since the reports which we submit

are not usually in their hands until about the 17th of the month following the closing period. The report which we give them, therefore, is a post mortem, so to speak, and it is used more for a long-range control purpose than as an immediate control of the operations.

CHAIRMAN GREEN: Thank you, Tom. Suppose we go along to Question 4: Are variance reports for major executives more condensed than those submitted to factory managers, department heads or foremen? What has been the practice in this respect? Do we condense reports more for major executives than we do for others in the group? I believe Mr. Bechler this morning had a very definite idea on that, but what is the experience of this group here this afternoon?

TREATMENT OF OVERTIME PREMIUMS

MR. SLAVIN: Mr. Chairman, may I disrupt the continuity of this program as you are presenting it. Before it is too late and before we leave labor variances I would like to get this thought in. I would like to get an expression of the group, or some sort of opinion, as to how excess for overtime is treated—whether it is treated as a variance of labor or as a budget variance?

I know it has become a problem. Our budget is based on normal operations that do not take into account excess for overtime. When I say excess time, I mean premium for overtime. I am very much interested in finding out how that is handled, whether as a direct labor variance, as a variance chargeable to management, or some other variance.

If anyone has had any experience in handling these items, I would appreciate a statement from them.

STANLEY ZWECKBRONNER (*Cost Accountant, Monroe Calculating Machine Co., Orange, N. J.*): I would like to answer your question, Mr. Slavin, if I can, by saying that we treat it in this manner: We have developed a revised standard labor rate. The revised standard labor rate is based on anticipated overtime payments for a given period of time.

In addition to that, the standard labor rate also includes an allowance for all other factors which we can attribute directly to labor. I have in mind vacations. The standard labor rate allows for the

fact that we pay for fifty-two weeks but get only fifty weeks' work. The same applies to holidays. An allowance is also made in the standard labor rate for a certain number of holidays to be paid to hourly-rated employees.

Still another is the allowance for Social Security payments. In this manner we have built up labor rates that are pretty much all-inclusive, and then any additional costs beyond the revised standard rate are treated as overhead variances, i.e., variances chargeable currently against the overhead account.

BERTEL W. STRAIGHT (*Department Chief, Western Electric Co., Kearny, N. J.*): We treat overtime allowances as an item of labor in a method similar to that just stated. Labor payments such as overtime allowances, vacations, paid-for-holidays and night bonus and accruals for pensions, Social Security taxes and employment stabilization are combined and recovered in a standard rate applied to standard direct labor. The difference between standard recoveries and actual payments and accruals is considered a labor variation.

SIDNEY R. CATSIFF (*Supervisor of Costs, General Electric Co., Fort Wayne, Ind.*): Mr. Chairman, I am not going to tell you how we treat it, because in my opinion, as accountants, we spend entirely too much time arguing about things like this—whether it should be expense, or this kind of variance or that. After all, what is the difference? We are setting these things down for one purpose and one purpose only, and that is, to know what they are.

It seems to me that, depending upon your own individual accounting system, the easiest way that you can set out any given expenditure is the correct one. All you want is to segregate it without distorting some other expenditure. For example, don't put your overtime into the spoilage account so that, when you are spending overtime, it looks as if your spoilage had gone up. Other than that, I don't think it matters where you put it.

Do it as cheaply as you can and get it out as fast as you can, but get the facts and do something about it. I think the less we argue about it, the more the boys down in the shop are going to understand what we are talking about. I come from a company that at one time regarded a lot of these rules almost as a bible. Such-and-such a thing had to be expense and it was heresy if you talked about doing

anything else. A lot of that was caused by looking at it from a bookkeeping angle rather than a control angle.

FRANCIS A. PAQUIN (*Auditor, Firestone Rubber Co., Fall River, Mass.*): Mr. Chairman, I would like to disagree with the last speaker. My thought on direct labor is that direct labor is the basis of figuring your overhead on standard costs, and we like to have those items which are uncertain out of direct labor. Overtime is set up in a special account and charged to indirect labor or factory expense, so that the cost department, in figuring up their cost for the next six months and figuring all their sales and quotations, are basing their overhead per cents on a basis which they really expect to hit, eliminating the uncertain factor of overtime which is difficult to predetermine.

MR. CATSIFF: Mr. Green, may I clarify one point? I am glad Mr. Paquin brought that up. I hope that nobody understood me to mean that the report should go out with everything all together so that we don't know what we have in it. I did not mean that. I say, make your segregation and follow it. Of course, you don't want items swallowed up in direct labor or hidden in with the rest of the stew, so that you don't know what you've got there. But after you have shown it separately, the question of its classification is essentially unimportant. That is more of a bookkeeping problem.

CHAIRMAN GREEN: I think that is right. Shouldn't our setup reflect the effects of abnormal conditions, such as we are living in today, and which we do not hope to be living in tomorrow?

MR. SLAVIN: Mr. Green, I would like to reply again to Mr. Catsiff. I think it does have an important bearing on your costs as to where and how you treat items such as we have under discussion. Take, for example, excess time. You might treat it as direct labor, and in that way increase your direct cost. On the other hand, you might treat it as overhead, and because of the volume that produces this overtime, your actual rate may not be increased at all; as a matter of fact, it might come down because of the volume that caused this overtime. We have found the latter effect in our case.

It does make a difference where you put it. If you put it into

direct labor and keep your standard rate, you are increasing your cost. If you put it into manufacturing expense and because of volume are able to absorb that much, and more, it would tend to lower the actual rate. The volume you have may even cause a lower actual rate of overhead than you have been using for standard. I hope I have made that clear, because I think it is important.

FRANCIS J. MCCARTHY (*Assistant Treasurer, Greist Mfg. Co., New Haven, Conn.*): Mr. Chairman, we put the overtime into an overtime premium account, as factory expense, and write it right off in the overhead to cost of sales, during a given period.

MR. BEAVEN: That question was included in a recent questionnaire sent out by National Headquarters. It was also answered in the Question and Answer Section of the *Bulletin* for February 1, and the consensus was that it should be handled as direct labor variance. At that time we adopted that policy and all variances due to direct labor overtime are now considered as direct labor variances. All overtime excess on indirect labor is considered as burden variance. That is the way we are handling it now, due to the statement in that issue of the *Bulletin*.

DISPOSITION OF VARIANCES

CHAIRMAN GREEN: Judging from this active discussion, we would need about six hours instead of an hour and a half to cover the outline. Therefore, I wonder if it would not be better to deviate from our original idea of trying to follow the outline and perhaps have the group pick out a particular sub-topic or sub-topics that they would like to discuss or on which they would like to comment or raise questions, either on the analysis of variances or the disposition of variances? We have not even touched the disposition of variances as yet. Perhaps that is a better plan to follow at this moment.

N. H. MARKOW (*Cost Accountant, Tung-Sol Lamp Works, Newark, N. J.*): Mr. Chairman, I would like to get some opinion on when variance accounts should be closed into operations.

CHAIRMAN GREEN: Who is willing to give us an answer to that? When or how often are variance accounts closed into operations—as

they occur, daily, weekly or on a monthly basis, or are they closed on a semi-annual or annual basis? What is the practice?

MR. BARTO: We close them out every month.

CHAIRMAN GREEN: I see; you close them out into the cost of operations on a monthly basis. I would like to see just how many do that. (The majority.) It looks as though by far the greater percentage of those present adopt that method. Are there any here who close those variances out in even a shorter period—a weekly period or a semi-monthly period? Let's have a show of hands on that. (None.) It seems to me that the month is the shortest period in which we really close out those variances. There seems to be a pretty widespread practice on that particular point.

We seem to have jumped from analysis to disposition of variances. Have we left any points untouched on the analysis of variances, before we get into a discussion of disposition?

MR. PAQUIN: There is always the problem of absorbing overhead into work in process to determine the cost variance for the month. I would like to hear some ideas from the members of the group as to just how they absorb their factory overhead, so as to determine their cost variance on overhead for the month.

MR. MARKOW: In our company we use the actual direct labor as a base. We gather the actual expenses which constitute our overhead and deduct this from the standard overhead which is a predetermined percentage of the actual direct labor. The difference between the actual overhead expenses and the standard gives us the variance—either a gain or a loss.

CHAIRMAN GREEN: In other words, you debit your burden variance account with the actual expenditures, and you credit it at the standard rate, which leaves an unabsorbed portion which you write off at the end of the month. Is that the case?

MR. MARKOW: Yes.

CHAIRMAN GREEN: Does anyone disagree with that, or have any other practice to offer?

GEORGE C. LYON (*Cost Supervisor, Limerick Yarn Mills, Limerick, Me.*): We apply our overhead on a percentage of the direct labor basis and absorb the variance quarterly rather than at the end of the month. We find that there is a carry-over on the monthly basis, and that we sometimes have considerable direct labor in process; we therefore find it more effective to close it out quarterly, when the physical inventory is taken, than to close out the direct labor variance every month. We have less detail work to do then, we find. But we do use substantially the same method except that we close after a longer period.

CHAIRMAN GREEN: That is a very interesting practice.

MR. JOY: Do you use that same method in your monthly statement?

MR. LYON: Yes, we use that in the statement, but because of some difficulty in estimating the direct labor in process, the overhead in process is a problematical figure. We can get a good figure quarterly, whereas monthly it would be very difficult to do that. For that reason, we merely make an estimate of the overhead that has accumulated in process and we put it into the monthly figures, subject to adjustment on the quarterly report.

JAMES L. BROWNLEE (*Procedure Supervisor, Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.*): Mr. Chairman, it was stated that the variance was closed out monthly. I would like to ask, to what account? Is it closed out to profit and loss? What is done about the variance in inventory, if you are using standard costs for monthly closings?

MR. MCCARTHY: We charge off our departmental loss monthly.

CHAIRMAN GREEN: You write into the profit and loss account the variances in material, labor and burden.

SHERMAN M. CHANDLER (*Plant Accountant, Combustion Engineering Co., Inc., New York, N. Y.*): Our variance accounts for over- or under-absorbed costs, consisting of labor and overhead, are closed to profit and loss through the cost of sales account and our in-

ventories are valued at standard cost regardless of the size of our variance account.

MR. BROWNLEE: Mr. Chairman, may I ask another question? I would like to ask for a show of hands of those represented here who use standard costs in valuing inventory that close out the variances directly to profit and loss?

MR. SLAVIN: May we have a little clarification on that? Do you mean monthly, and then at the end of the year make some distribution of it between inventory and cost of sales?

MR. BROWNLEE: No, I mean direct.

CHAIRMAN GREEN: How many do that—close out the burden variance directly to the cost of operations, monthly? Will you raise your hands?

MEMBER: Do you mean the cost of sales?

CHAIRMAN GREEN: Either to the cost of sales, or as a separate item, set forth below the standard cost of sales. (About 30) How many do not follow that method? (4 or 5) It seems that the large majority here use that method.

HERBERT J. MYERS (*Controller, Farnsworth Television & Radio Corp., Fort Wayne, Ind.*): May I add a word to that? I think there is a misunderstanding on that question because, to me, cost of sales and profit and loss mean the same thing.

CHAIRMAN GREEN: That's right. It results in the same final profit or loss, there is no question about that, but do you inflate your cost of sales by including the variances, or do you show them as separate items?

MR. MYERS: We show them as separate items; we indicate what they are.

CHAIRMAN GREEN: I believe some companies follow the practice of stating the standard cost of sales and bringing down the standard

operating profit, and then set in the variances below, thus coming down to a final operating profit.

DISPOSITION OF VOLUME VARIANCE

MEMBER: The monthly variance report should break down the overhead variance into factory controllable variance and fixed expenses, under or over. The under- or over-absorbed controllable expense should be charged to the cost of sales, and the under- or over-absorbed fixed expense should be charged to the sales department because the cost of sales is charged to the sales department and billed to the sales department at normal cost.

CHAIRMAN GREEN: You really have your burden variance split into two component parts, one, which is really a volume variance, and the other, which is a price variance.

MEMBER: That's right.

CHAIRMAN GREEN: And your volume variance, you charge against the selling function.

MEMBER: Yes, simply because the cost of sales is charged to the cost department at standard cost and it is not a factory problem, whether the factory is operating at 60 or 90 per cent of capacity. That hasn't anything to do with the factory foremen or the superintendent. That is a sales problem.

CHAIRMAN GREEN: Does anyone disagree with that theory?

MR. BROWNLEE: Does the salesman object to that?

CHAIRMAN GREEN: That is what we are going to find out. How many disagree with their theory of practice? Will someone comment on that?

HORACE G. BARDEN (*Assistant Manager, Ernst & Ernst, Indianapolis, Ind.*): I would like to ask a question in that connection. I am a little uncertain as to what you mean by charging the sales depart-

ment. Do you mean by that that you include it as an expense of the sales department, and if so, how does it apply to unit product cost in arriving at a total cost figure? How do you get it into your cost, if you charge it to the sales department?

MEMBER: You don't get anything into the cost, the normal cost—if that answers the question. It is charged to the sales department simply as a normal cost.

CHAIRMAN GREEN: But your sales department is not held responsible for that variance.

MEMBER: It is a profit and loss item.

CHAIRMAN GREEN: I see. But the responsibility for creating or incurring that variance lies with the sales department. Is that what you mean? It is not added on to their cost, but they are held responsible for the fact that that variance shows on the report.

MEMBER: Correct. It is posted on the sales department's variance report as a factory charge to them for under-absorption of fixed factory expense.

CHAIRMAN GREEN: But there are no accounting entries made, charging it to cost?

MEMBER: That's right.

USE OF STANDARDS WITH LAST-IN, FIRST-OUT METHOD

MR. GRASHOF: I would like to ask whether anybody here has had any experience in reconciling the carrying of inventories at standard (with the disposing of variances in one way or another) with the new last-in, first-out method of inventory valuation and the various regulations that the Treasury Department has made in connection with it?

CHAIRMAN GREEN: I am glad you raised that question, for it is a very important one that many of us are going to have to face. Will someone give us an answer to that? Mr. Patterson, I wish you would.

MR. PATTERSON: That sounds like a pretty big order, but here is one phase of it on which I would like to digress a bit. We were talking about the adjustments against standards, the deviations against standards, and what we do with them. I think that problem is tied up with how often we change our standards. If a company does not change its standards very often I think it would be very sound to reflect in this year-end inventory valuation some adjustments indicating the variance between actual experience during the year and the standards set up. However, if you change your standards frequently as we do in our company (we change them once a year), and the new standards really reflect the economies that have transpired during the year, then we believe that no further adjustment is needed in the new standards since they already reflect cost reductions or cost increases, as the case may be.

Now, when you come to the last-in, first-out basis, I can only give you our practice. We take the basic material component in our inventory and carry that at a base price. We use, for instance, linseed oil in the manufacture of linoleum. If you look at the finished stock of linoleum, you, of course, cannot see the linseed oil, but it is a very convenient handle to take hold of, so we say that in the finished stock we have a certain amount of linseed oil and base this statement upon the quantity of linseed oil that normally enters the finished stock we are considering. To this total is added the equivalent pounds of linseed oil in process, and the actual pounds of raw materials on hand. The total of these three items is carried at one value which is the last-in, first-out rate times the quantity.

We started using the last-in, first-out method at the beginning of 1940 and as long as we have equal quantities on hand at the end of 1940, corresponding to what we set up at the beginning of 1940, the same basic rate per pound will be used in inventory valuation. A simple method of getting your standard value down to the last-in, first-out value is to take the difference between the standard inventory valuation and the last-in, first-out value, and set this difference up as a valuation reserve. This reserve is deducted from our standard inventory total as of the end of the year and the net figure is used for tax closing.

No doubt there are other methods of operating the last-in, first-out method, but I am just passing along this information on the procedure which we found expedient to use.

MR. GRASHOF: In other words, you don't disturb your normal accounting practice so far as the inventory standards are concerned, in applying the last-in, first-out basis?

MR. PATTERSON: That's right. It doesn't affect our cost of sales each month. We make our adjustment at the end of the year for differences in quantity.

MR. GRASHOF: Do you make the adjustment in every item of your inventory, or is there simply one general adjustment?

MR. PATTERSON: It is an adjustment on all items in the inventory which we have elected to use for the last-in, first-out basis.

MR. GRASHOF: What I mean is, do you adjust the price of all of the items on inventory, for example, all the different classes of linoleum, every item which uses linseed oil?

MR. PATTERSON: No. We allow that valuation to stand on the individual items and change the total.

MR. GRASHOF: The total inventory value only?

MR. PATTERSON: That's right; we make one adjustment.

CHAIRMAN GREEN: Then you have a valuation account to reflect the difference between standard cost and the last-in, first-out cost, do you not?

MR. PATTERSON: That's right.

CHAIRMAN GREEN: The reserve is shown against your standard value to arrive at your last-in, first-out value. I think it follows that you have to maintain some subsidiary records of your basic inventory at the beginning of the first year in which you elected to use the last-in, first-out method and a subsidiary record of changes as the inventory is built up or torn down. It does not necessarily have to be voluminous. You may find it expedient to use the last-in, first-out method for only your major materials. By doing that you use a minimum of effort, whereas if you were to include a lot of the smaller

items of material, you might be putting in two or three times the amount of effort for a very slight difference in costs and inventory values.

After all, I think it is a matter of economic balance of effort versus results which we have to consider when we elect to use that method. Would anybody else like to say something about their experiences with the last-in, first-out method?

MR. MYERS: It seems to me that there is a little confusion about the last-in, first-out method, and I would like to say something for the benefit of clearing it up. I would like to call the attention of the members to the fact that Mr. Bennett covered that subject very well at last year's convention. He pointed out that it is not mandatory that you adopt that method, and there are some industries, in fact, many industries, where it is not practical to adopt it.

CHAIRMAN GREEN: It is entirely a matter of election, as far as that is concerned.

ALLOCATING VARIANCES TO COMMODITY GROUPS

CHAIRMAN GREEN: Returning now to variances from standard, does anyone have a question on any sub-topic under analysis or under disposition of variances?

MR. WEPPLER: I would like to hear some discussion on item 5: "In charging variances into the cost of operations, what effort is made to allocate variances to major commodity groupings for the purpose of determining commodity profit and loss?"

CHAIRMAN GREEN: That is a very good question, because it is something that all of us, or a great many of us at least, have to think about. It is a matter which requires breaking down the condensed operating statement into its component parts, or taking the picture apart, seeing what makes it tick and determining where the weak spots and the strong spots really are. That is the primary objective, I believe, in the preparation of commodity profit and loss reports. This should make a very good point for discussion.

MR. CATSIFF: Our experience in trying to break down variances has shown that it is almost impossible to get a decent job of segrega-

tion when you try to go beyond what I call a manufacturing unit. If you have in a given department two lines of products, intermingled, and you would like to separate them, you are apt to find, I think, that you are going to do a lot of bookkeeping for a very questionable result.

Where it is important to know within a given department whether or not we are losing money on a given portion of the product in that department, we try to spot-check or make memo reports for a short period of time, to get the information. In actually trying to get it into the profit and loss statements, we found that the results were very questionable and we have never had confidence in them after they were obtained.

CHAIRMAN GREEN: Will someone take the opposite point of view on this question?

MR. MARKOW: The first thing we do in making up our forecast (we forecast all our business) is to break the factory cost down into elements, and after we have completed that, we know on a percentage basis of our factory cost, what our different stock elements are to our total standard cost. Then, as we post our sales (we post our sales simply as total factory cost) and arrive at the total, we ratio that back to these different stock elements, based on the original forecast ratios. Then the stock variances are broken down, or broken back to the different stock elements and the various lines based on the ratios.

CHAIRMAN GREEN: Can we have some other comment, either in favor of or against commodity profit and loss?

FRANK J. COLKOS (*Accountant, RCA Mfg. Co., Camden, N. J.*): I just wanted to point out that under a job cost system, all this commodity breakdown would be available.

CHAIRMAN GREEN: That is very true, but I believe that today there are a great many industries which are using standard costs and do not use the job cost method. Under a standard cost plan, are we in favor of commodity profit and loss statements, or are we against them? What seems to be the consensus here?

MR. MYERS: I don't see that it makes very much difference, once you determine what your variances are, what you do with them, except to write them off, because they have little connection, in most cases, directly with a product. You are only arriving at a theoretical profit and loss by-product, if you try to allocate it. It does not help control.

After all, what are we operating standard costs for? Primarily, I think it is for control, and the important thing is to determine what your variances are and where they occur. What difference does it make? As Mr. Catsiff has said, it is very difficult, almost impossible, to split them up properly between products.

CHAIRMAN GREEN: Does it not depend very largely on the type of industry involved? I don't question the fact that there are certain industries where it would be very difficult to segregate material costs, labor costs and burden costs, even by major products. But, on the other hand, there are a multitude of businesses where you can definitely segregate material, labor and burden costs. The benefit that is to be derived from making that effort, as I see it, is to show what lines of products are really contributing to the profit side and what lines of products are contributing to the loss side of your final operating picture.

It may be that in your particular business, you have to sell some items (sometimes called "leaders") below cost, but, on the other hand, there is a psychological point in the development of commodity profit and loss, as I see it, in that it materially aids in the development of a cost reduction program. Anything at all that can be done to reduce cost is going to contribute to the betterment of that particular commodity which is showing a loss, and although we cannot, perhaps, entirely eliminate that loss, I believe when the facts are laid before us clearly, as they can be in many lines of business, you will know where you have to concentrate your effort to better the entire picture.

In other words, if you had a number of eggs in a basket, you would not know which were good and which were bad (unless some of them began to smell), but if you could lay them out and inspect them, one by one, then you would know which ones were good and which ones were bad. That, after all, is what you are trying to do with commodity profit and loss. Of course, in some lines of business the problem will naturally be more difficult than in others, but any effort made along this line, it seems to me, even if only partial, perhaps by the

major commodity groupings, can result in definite benefit. Obviously, your results are limited by the type of business and the conditions which are incidental to your particular business; there is no question about that.

MR. MYERS: I beg to disagree. It is true that in a process-type industry, you can split up your costs into your cost elements; as a matter of fact, you can do it in any type of business I know of, and that does furnish a good basis for allocating variances to product lines. But when you are through with that, what have you got, after all? You haven't got anything that helps control.

Let me cite a case that I have used in many instances, as an illustration. Here we have product A and B. They go through one process and one machine. Let us assume that it might be a machine that is operated with a belt. The operator becomes careless and lets the belt get loose, or lets it slip. His efficiency drops. Product A happens to go through there today, but by tomorrow somebody has discovered that the efficiency was down and the cause of it was the slipping belt. The belt is tightened up, and it happens that product B goes through there tomorrow. Now, was it product A that cost more to make, or was it the cost of a slipping belt?

CHAIRMAN GREEN: That is a very good question.

MR. MYERS: It is the cost of the slipping belt.

CHAIRMAN GREEN: Well, gentlemen, I think we could engage in an argument on this point that would last until the wee hours, but I still believe—in fact, I believe in it because it is the result of actual experience—that, as I say, by pulling the picture apart and seeing what really makes it tick, you are able to effect cost reductions. I know we have been able to do that. If you have an operating statement that combines many products into a single statement of profit and loss, you don't know which items have contributed either to profit or loss, as shown on that statement. Therefore, you cannot definitely know where to apply corrective measures, or particularly where to institute cost reduction programs.

I know that in the Armstrong Cork Co. we have been able to make substantial gains and effect considerable cost reductions just by having such information brought to our attention in the form of com-

modity profit and loss reports. Some of the costs, naturally, cannot be allocated as readily to commodities as others can, but if we can get two out of three cost components definitely allocated, at least we have something definite to go by. We have a place at which to strike. Of course, the circumstances, again, alter the case; there is no question about that.

MR. CATSIFF: Before you leave this, Mr. Green, I don't think that you and Mr. Myers are really in disagreement. I think I started something which I did not state clearly enough. I agree, and I am sure that Mr. Myers agrees a hundred per cent, that there should be segregation of variances between products where the inherent nature of such variances differs between the products and where—the point I tried to make—it is easily possible to do a satisfactory job of segregating. But we should not get back into the errors of the old job cost system. That is all we argue—that just because a machine happens to break down today or a workman happens to drop this particular batch of stuff, to say that that particular cost is higher today, is not, I believe, what you meant.

CHAIRMAN GREEN: No.

MR. CATSIFF: But you did mean, as far as possible, to segregate the inherent variances.

CHAIRMAN GREEN: Isn't it a matter of economics to make the effort where you can really get something out of it? It is balancing the situation out, after all, and it takes keen vision and ability to be able to analyze the situation and determine what can be done; whether you are going to spend a great deal of money trying to do something that will produce very little results, or whether your results cannot be justified as being sufficiently accurate to be practical and to be accepted by the management as such.

The time is getting late, and we still have a number of points that have not been touched on. What do we have here that you would like to discuss?

TREATMENT OF FIXED OR STAND-BY COSTS

CLARENCE W. SNYDER (*Assistant Controller, John A. Roebling's Sons Co., Trenton, N. J.*): Mr. Chairman, a good many of us raised

our hands when you asked whether we disposed of variances by charging them to cost of sales or to profit and loss. I want to raise one more point in connection with that vote. We have, of course, two kinds of variances, loss variances and profit variances. I can agree with most of you on disposing of loss variances directly to profit and loss as they occur, monthly, but I think there is a fallacy in disposing of a profit variance directly to profit and loss. Let us consider volume variances only. Most of us may set our burden rates at some normal volume, say that of 1937, or 1939, or 1940, which were fairly good years, comparatively speaking. Well, in 1932 and 1933, most of us were under-absorbing overhead, with idle plants, and we took those variations into profit and loss, and rightly so, because we did not want to put any idle plant losses into inventory value.

Now, we are in a defense period with over-absorptions at 25 to 50 per cent over that so-called normal capacity. Now, if you take those profit variances direct to profit and loss, I think you are overstating your profit through overvaluing your inventory. The cure for it, in my opinion, is to set out with your cost of sales at standard, deduct your variances as measured, volume and all, and then offset those profit variances with a debit sufficient to provide a reserve for reduction of inventory from standard to actual cost.

The theory in doing this is that we should not value inventory at more than actual cost; we should take losses as they occur, but never anticipate a profit. I would like to hear a few remarks on that, as to whether I am wrong or right.

CHAIRMAN GREEN: That is a good question.

MR. MYERS: I look at this from the standpoint of an accountant. We always argue that consistency is a virtue, but when you make such an adjustment, you are not being consistent.

However, I am not arguing that we should continue our present practice. Some of you attended one of the technical sessions last year in which there was quite a bit of discussion on what to do with this so-called fixed or stand-by cost. There was a discussion when the convention was held in Cincinnati on the same subject. I bring it up again. I don't want to speak at length because time is getting short, but I want to call attention to a solution to that problem. Let's take our fixed or our stand-by cost out of our inventory valuations and charge it off each month, because it is the same each month whether you have zero

volume or twice the volume that your costs are based on, and value your inventory on the variable costs only.

There is an *N.A.C.A. Bulletin* on that very subject, and this procedure is advocated in it. Mr. Gardner and I had quite a discussion on this in just such a meeting as this last year.

CHAIRMAN GREEN: I think there is much food for thought in that theory.

MR. BARDEN: May I enlarge on that point? Did I understand you to say, Mr. Myers, that you would leave the fixed or the stand-by costs entirely out of the inventory, or would you leave these fixed expenses in the inventory for fiscal closing purposes, but allow them to stand at that same figure throughout the year? For the interim periods, I assume you would absorb into your inventory and take out of your inventory only your variable cost burden.

MR. MYERS: I didn't mention the latter method but I doubt that you would get into any trouble with the Treasury Department if you did it that way. I will agree that that might be a good practice.

CHAIRMAN GREEN: I wonder if we don't have to take a long-term point of view on this question, because, after all, I think we realize that at the moment we are in a rather unusual economic situation, and a situation which is not going to last indefinitely. While we are subject to over-absorption in many lines of industry today, how long is that going to last? Aren't we going to be subject to a revision of our thinking, perhaps in another two or three years, and hadn't we better think about a long-range picture here, rather than just a picture of the moment, which is really incurred by this tremendous volume of production that confronts us all?

MR. BARDEN: Mr. Green, I have listened to this discussion about the handling of stand-by or fixed costs in two or three instances within the last year or so, and I would like to see more discussion of it through the monthly *Bulletins*. I know that there are many of you men who, upon further examination of this somewhat revolutionary method of absorbing costs in inventories, are going to see that there is a lot of merit in it. I believe it is going to be developed further in the near future. Being in public accounting, I have seen some very

interesting discussion on it and feel that there is a lot of current thinking on the problem.

DISPOSITION OF VARIANCES ON PARTIALLY COMPLETED GOODS

H. BURRELL ROBERTSHAW (*Accountant, Eastman Kodak Co., Rochester, N. Y.*): Mr. Chairman, I would like to ask a question of the group, if I may, about the case where partially completed goods are sold to other concerns, and a variance is built up on both goods which you intend to finish and goods which other concerns are going to finish. How are we going to dispose of those variances at that point?

CHAIRMAN GREEN: That is a good question. Is there anyone who has had experience with that particular set of circumstances? Can we have an answer to that?

MR. LYON: Do you mean that you sell your partially processed goods or do you commission them for final sale?

MR. ROBERTSHAW: They are sold in a partially completed state.

MR. LYON: Then I would treat it as a sale—just as any other sale. It is a complete sale as far as you are concerned.

MR. ROBERTSHAW: Yes, it is completed as far as we are concerned, but how about the actual cost, you might say, of that particular item that has been sold? How about the profit and loss on that sale?

MR. LYON: I would treat it just the same as profit and loss on any other sale, charging its cost into your cost of sale. In our business, we partially process goods and then commission the remaining process. Sometimes we pay more for the finishing than we receive, and sometimes we pay less for it. We carry its total cost to the cost of goods sold account after it has actually been sold.

MR. ROBERTSHAW: The important part of my question is to find a profit and loss on the partially completed goods which are sold, and a profit and loss on the completed goods.

CHAIRMAN GREEN: Doesn't that bring up the point of having your variances determined and expressed by operations and departments so that you can tell what the accumulated variance is at any stage? If you are breaking it down as you go along, it is automatically taken care of, isn't it? You are making an outright sale, whether you regard it as a finished product or as work in process. There is no reason, as I see it, for distinguishing between the items which are work in process and those which are finished stock. You can thrust your variances into the cost of operation at any point where the goods are sold.

There is one question which has not been raised as yet, and I am surprised that it has not come up. We have not had any disagreement on the matter of throwing all variances into the cost of operations at the end of the month. There has always been some difference of opinion, I believe, on that particular subject. There are many men who feel that the variances should be closed into the cost of operations as the units are sold. Others feel that they should be closed into the cost of operations as the units are produced.

We have not had any evidence here this afternoon of any such difference of opinion on that point. Perhaps it exists but it just has not been brought out. From what has been said, I have gathered the impression, although I may be wrong in this, that you are all charging variances to the cost of operations as the goods are produced. Is that interpretation correct, or do you disagree with it?

MR. MYERS: I think we are getting to be more practical.

CHAIRMAN GREEN: I believe that is right, but there was a great deal of opposition to that idea up to just a few years ago. I found out, in addressing a number of N.A.C.A. chapters, that there was still a great deal of opposition to charging off variances as the goods were produced, even though it does not really do much good to carry them over. You have a problem there that you have to deal with sooner or later, so why not dispose of it as soon as possible and state your financial reports on the most conservative basis, rather than argue the academic point of whether you are going to write it off this month or next?

We have come to the end of our time, and I am very sorry that we cannot continue this stimulating discussion. It has been spontaneous and has covered many interesting points. I am sure that we are all

going to carry away with us some better ideas of various accounting processes and procedures which we can apply in our own individual cases. I am very sorry that no more time remains. I appreciate the active participation here this afternoon, and I hereby declare the session adjourned.

. . . The meeting adjourned at three thirty-five o'clock . . .

REQUIREMENTS FOR EFFECTIVE INTERNAL AUDIT AND CONTROL

Chairman: THOMAS A. DUNBAR

Assistant General Auditor, Boston Elevated Railway Co.,
Boston, Mass.

CHAIRMAN DUNBAR: As a part of the day's technical program, these group discussions have been organized to permit you to choose the subject in which you have particular interest. Your presence here this afternoon indicates to me that the subject assigned to this group, "Requirements for Effective Internal Audit and Control," is your choice.

We all recognize that in the short space of time allotted, it will not be possible to discuss exhaustively all the points relating to this subject, and that we cannot possibly all agree on any one best way to set up internal audit and control procedures to meet all situations. However, if you go away from this discussion period with an uncomfortable feeling caused by mental activity, the meeting will not have been in vain.

Let me say at the outset that while preparing for this assignment I referred very frequently to the N.A.C.A. literature on this topic, and I wish to record my appreciation of the excellent presentations of this important subject of internal audit and control at previous conventions and in the *Bulletins*, and to make acknowledgment to the authors for the interest which they have stimulated. Articles and discussion groups such as this have the effect of clarifying our understanding and establishing accepted methods for internal audit and control procedures.

According to the instructions issued to the discussion leaders by the Program Committee, it is expected that the sessions will open with

only a short introductory statement by the discussion leader. My job as discussion leader is to raise questions rather than to answer them, to try to get as many as possible to contribute their experiences and thoughts on the subject, and to keep the ball in the fairway and out of the rough. For that purpose, the discussion outline distributed to you may help, although you need not follow it exactly.

First of all, let us consider briefly the reasons for internal control and internal audit. One of the reasons is the expansion of business and related managerial activities. A sole proprietorship needs only simple methods to safeguard the owner's investment. As the business increases in size and scope, managerial responsibilities are relegated to the department heads, and the need for control arises in order to protect not only the investors but also the individuals in the organization itself. As the business enterprise further spreads out, with its activities and plants located in various parts of the country, and the world, perhaps, the need for control is even further emphasized. Managerial control makes use of many devices such as budgets, standard costs, etc. But today, we are going to concern ourselves in this discussion group with considering some of the "requirements for effective internal audit and control."

It seems to me that the increase in managerial activity which I have mentioned has caused more effective accounting information to be required. Therefore, there is a demand for timeliness and accuracy in the preparation of accounting financial and statistical data. Before proceeding with the latter items under the outline, let us review for a moment certain definitions, concepts and terminology.

Here again we must be sure of ourselves when we discuss the various terms concerned with internal audit and control. Who would like to give me his definition of internal control in accounting parlance?

DISCUSSION OUTLINE

**REQUIREMENTS OF EFFECTIVE INTERNAL
CONTROL AND AUDIT**

- I. CONSIDERATION OF THE REASONS FOR THE IMPETUS OF THE INTERNAL CONTROL AND INTERNAL AUDIT FUNCTION
 - (a) Expansion of managerial activities.
 - (b) Obligation of management to the public interest.
 - (c) More effective accounting information to meet needs of modern business activities.
 - (d) Demand for timeliness and accuracy in the preparation of accounting and statistical data.
- II. REVIEW OF DEFINITIONS, CONCEPTS AND TERMINOLOGY
 - (a) What does "Internal Control" mean in accounting parlance?
 - (b) What does "Internal Audit" mean in accounting parlance?
 - (c) References to authoritative literature.
- III. THE RELATIONSHIP OF INTERNAL CONTROL AND AUDIT TO OTHER FUNCTIONS OF BUSINESS
 - (a) What properly are the duties of a controller and to whom should he be responsible?
 - (b) What properly are the duties of an internal auditor and to whom should he report?
- IV. ORGANIZATION FOR EFFECTIVE INTERNAL CONTROL
 - (a) What are some of the objectives?
 - (b) How may these objectives be made more effective?
 - (c) What is the place of standard instructions, manuals and standard procedures, and who should prepare them?
- V. ORGANIZATION FOR EFFECTIVE INTERNAL AUDIT
 - (a) Should there be a department or individual charged with the duty of internal auditing?
 - (b) What type of personnel is required?
 - (c) What attitude should the internal auditing staff assume in their relation to other departments?
 - (d) Cite the main objectives of an effective internal audit program.
 - (e) What should be the nature and frequency of reports of internal auditors and to whom should they be submitted?
- VI. REVIEW OF THE CURRENT PRACTICES INVOLVING INTERNAL CONTROL AND AUDIT
 - (a) Purchases, accounts payable and cash disbursements.
 - (b) Cash receipts and accounts receivable.
 - (c) Cash receipts, where important amounts of currency are collected.
 - (d) Inventories.
 - (e) Plant additions and replacements.

VII. A FEW SUPPLEMENTARY REQUISITES TO AN EFFECTIVE INTERNAL CONTROL AND AUDIT PROGRAM

- (a) Proper application of machine accounting and other equipment aids.
- (b) Preservation of records and uniform procedures with respect to destruction of records.
- (c) Use of comparisons of unit costs.
- (d) Statement of source and application of funds prepared by internal auditor.

VIII. RELATIONSHIP BETWEEN INTERNAL AUDITORS AND OUTSIDE AUDITORS

- (a) How should the activities of these two groups be co-ordinated to assure both efficiency and economy to management?
- (b) Should the auditing programs of both internal and outside auditors be on a co-operative basis?
- (c) What has brought about the interest of the outside auditor in internal auditing?
- (d) Is there not a responsibility of management to protect the certificate of the outside auditor by means of an effective system of internal control and audit which meet the requirements of accepted accounting practice?

TERMS DEFINED

ALLAN R. SHILTS (*Accountant, Price, Waterhouse & Co., New York, N. Y.*): I think one definition of internal control is that it is a system whereby one employee checks upon the work of another employee in the normal course of his duties.

CHAIRMAN DUNBAR: Does everyone agree with that, or would anyone like to amplify that definition?

WILLIAM E. BERGSTROM (*General Auditor, Caterpillar Tractor Co., Peoria, Ill.*): In order to obtain a definition of internal control, perhaps we should attempt to determine whether there is a difference between the term internal check and the term internal control. In my opinion the definition previously advanced relates more closely to the term internal check rather than to the term internal control, which has a broader meaning. The term internal check might describe the functions whereby the clerical accuracy of one employee is automatically and independently checked by another, whereas the term internal control might include many functions not necessarily related directly

to accounting matters. Relating internal control to accounting matters only, one might cite as an example the generally accepted procedure under which the mail-room, the cashier, the accounts receivable department and the general ledger bookkeeper, each performing independently their respective duties, are a part of the system of internal control. Under this line of reasoning it would appear that the term control relates to the system, and the word check to the functions actually carried out under that system. I will admit, however, that a rather fine line of distinction has been drawn in the definition of the two terms.

CHAIRMAN DUNBAR: Does anyone else wish to say a word on the definition of these terms—internal control and audit?

EARL A. GREEN (*Chief Auditor, Armstrong Cork Co., Lancaster, Pa.*): I wonder whether internal control could not be exemplified by the sort of arrangement under which your billing section prepares a control of its billings for the day, and the accounts receivable department, after summarizing, checks to make sure that they put the same total amount on the books. You have correlated the work of those two departments—the billing department and the accounts receivable department. That is a form of control, and part of the whole general picture.

CHAIRMAN DUNBAR: Would you distinguish between the audit and control function?

MR. GREEN: The audit begins where your accounting leaves off. Internal auditing is a check, made by the internal audit staff, of the accounting activities throughout the company. Internal auditing may mean a check of the work of an entire section or a spot-check of the work of that particular section. Internal auditing is a much broader field today than it has ever been before. We are doing a great deal more checking into the various phases of accounting work and even going beyond that and checking matters such as contracts by the sales department, seeing that they comply with state laws, that our tax bills are being properly paid, that the various types of Social Security tax regulations, for example, are being complied with, and also that state laws are being complied with—

many things of a nature that the internal auditors in the past did not generally go into. There is a more widespread coverage of company functions today in internal auditing than there has ever been before, due in some measure, perhaps, to the McKesson & Robbins case of several years ago.

I believe the internal auditors today include among their functions, more than ever before, the audits of inventories and accounts receivable, which formerly were touched upon very lightly, if at all, in many cases. For example, they now confirm accounts receivable with customers—a function of the internal auditing staff which was seldom exercised before. The internal auditing staff is going out to the various branches and the factories and checking the inventories, not only as to the physical existence, but also as to their degree of serviceability and availability. In other words, the factor of obsolescence enters into the value of those inventories. In general it might be said that anything which has to do with the interest of the company for which the internal auditing staff works, anything which comes to light through normal observation, is a part of the internal auditor's function, regardless of what phase of the company activity he goes into—selling, general administration, accounting or whatever it might be.

CHARLES H. TOWNS (*Partner, Loomis, Suffern & Fernald, New York, N. Y.*): I am not going to attempt to give a technical definition, but it seems to me that in thinking of internal control, we should go a little beyond the accounts themselves, and think in terms of carrying on to the management the information that is necessary, in such form as to be understandable and reliable, to aid in their control of the business operations.

MR. BERGSTROM: In a discussion of internal auditing, we should recognize two phases of internal auditing, namely, pre-auditing and post-auditing. The best example of what I consider a pre-audit is the examination of a voucher and the supporting documents before the check in payment thereof is written. In this type of pre-audit the internal auditor should satisfy himself generally that the disbursement is in order, that the material has been received or that the services have been rendered, that the clerical accuracy of the invoice has been verified, and that the functions of the receiving department, the inspection department, the purchasing department

and any other departments involved have all been carried out. A good example of a post-audit in internal auditing is the bank reconciliation, effected, of course, by individuals not directly concerned with the preparation or the distribution of checks. Another example may be the independent confirmation of receivables by means of direct correspondence with the debtors by the internal auditing department. Detailed audits made by public accountants must, except in rare instances, be post-audits. The results obtained from post-audits are, of course, invaluable, but, as we will all recognize, are sometimes obtained too late to be of immediate material assistance, resulting in the door being locked after the horse is stolen.

CHAIRMAN DUNBAR: If you have no objection, I should like to read the definition of internal check prepared by the American Institute of Accountants' Committee on Terminology. It is "a system under which the accounting methods and details of an establishment are so laid out that the accounts and procedures are not under the absolute and independent control of any one person—that, on the contrary, the work of one employee is complementary to another—and that a continuous audit of the business is made by the employees."

On internal audit, the Committee says that "the term refers to an audit made by members of the staff of the concern audited. Frequently, 'staff auditors', 'traveling auditors' or 'inspectors' are employed to make continuous or periodical audits of some or all of the transactions. The scope is not definitive, and their work is frequently supplemented by examinations made by public accountants." Incidentally, there is a recent article on this subject which covers it extremely well, I believe. It appears in Section I of the May 15, 1941 *Bulletin*: "Internal Audit: Fundamentals" and is written by Arnold O. Wolf. It is a very interesting paper, and ends with a series of well-classified questions which any internal auditor may well ask himself.

Another fine article is presented in the form of a fifty-page pamphlet written by Dr. M. E. Murphy, with an introduction by Professor Walker of the Harvard Graduate School of Business Administration. It is entitled "Internal Check and Control for Small Companies," and I recommend it to you highly. It is published by the Public Affairs Press of Washington, D. C.

Still another good article entitled "Punched Card Accounting from

the Audit Viewpoint," by Leon E. Vannais, was published in the *Journal of Accountancy* for September and October, 1940. Some of you may be interested in that phase of the subject.

The next topic for discussion is the relationship of internal control and audit to other functions. What, properly, are the duties of a controller and to whom should he be responsible? Would someone like to discuss the duties of the controller and whether or not he should accept all the responsibility for this program of internal audit and control?

RELATION TO OTHER FUNCTIONS

HARRIS R. SYMES (*Auditor, The Detroit Edison Co., Detroit, Mich.*): We have made some recent changes along that line in our company. Previously, general accounting and cost accounting were carried on under the direction of what might be termed our controller. The internal auditor reported to the controller. However, beginning with the first of this year, the internal auditor was taken out from under the controller's direction and he now reports to the president and to an audit committee of the board of directors.

The reason for this was mainly that the management felt that an internal audit staff should not be subject to any regulations that might come from the controller's office, but that the auditor should render a free and unbiased internal audit of the accounting procedures.

I would like to see a showing of hands or have some opinion on that subject because we have been quite interested in it.

CHAIRMAN DUNBAR: Before we do that, is there anybody who would like to discuss this subject a little further?

LYLE C. BOLLINGER (*Controller, Ideal Roller & Mfg. Co., Chicago, Ill.*): Mr. Chairman, I would say that for a very large company the gentleman is probably right because you have a large personnel. However, in the case of a smaller company you will have a smaller personnel and fewer accountants. In that case the controller may also be the general auditor and will make internal audits with the assistance of an accountant in the department.

Taking all companies as a whole, I think you will find that in most cases successful internal auditing control can be obtained by having

the general auditor reporting to the controller, with the controller reporting directly to the president and board of directors. It seems to me that the controller's function should be what the name implies, and certainly internal auditing would be controlling accounting functions.

CHAIRMAN DUNBAR: Does anyone differ with Mr. Bollinger? It has been suggested that we have a show of hands. First, let me ask Mr. Symes to repeat the question for us.

MR. SYMES: Let's put it this way: Should the internal auditor report to the controller?

CHAIRMAN DUNBAR: How many agree that the internal auditor should be responsible to the controller? (About 20) How many think he should be independent and report to some other official? (About 15) There are a great number who did not express any opinion.

FRANCIS A. PAQUIN (*Auditor, Firestone Rubber Co., Fall River, Mass.*): Mr. Chairman, I am neutral. I think that there are too many varying factors involved to say definitely to whom the internal auditor should report. I think that in some companies the internal auditor should report to the president or to the board, but in other companies he should report to the controller. I believe that it could be either way. It depends on each individual case.

J. ARTHUR MARVIN (*Partner, F. W. Lafrentz & Co., New York, N. Y.*): Mr. Chairman, I think that you are going to find that each individual case must be studied in order to determine which is best for each particular company. I don't think that you can lay down any fast rule for the development of an internal auditing staff, or say that the controller should be responsible for all the activities of the accounting and auditing division. It seems to me that each one of the gentlemen here would have to study his individual problem and present to his board of directors or the officers that method which would best suit their needs. It is evident from your vote here that there is a wide difference of opinion, and that is going to continue in the N.A.C.A. for many years to come.

MR. GREEN: Mr. Dunbar, I am inclined to agree with the last speaker. I believe that a survey of the management's attitude and setup as well as the definition of the duties of the controller of a particular company, might enter very heavily into that particular question and determine very largely the final answer to it.

I would also like to inject a thought here with respect to the duties of the controller. I feel that under present-day conditions, the controller should be an officer of the company and a member of the executive committee and that he should report directly to the president of the company.

CHAIRMAN DUNBAR: Would you include the idea that the internal auditor should report to the controller?

MR. GREEN: Not necessarily. It depends entirely on the type of management you have in your organization, the attitude of that management and what the responsibilities of the controller really are. There are a great many men in industry who have the title of controller—some of them are doing an auditing job while others are doing an officer's job. It would depend very largely on the particular situation. It is very difficult to make a general statement.

CALVIN A. NICHOLS (*Controller & Assistant Treasurer, American Meter Co., New York, N. Y.*): Mr. Dunbar, I don't think it is possible to lay down any hard and fast rule. It seems from what I have read and heard that one of the things that just isn't cricket is for the controller to be allied in any way with the treasurer's department.

In our particular company, the controller is assistant treasurer also, with his duties rather evenly divided between the two offices. In addition, his reports on internal auditing are all directed to the treasurer. Despite that fact, there have been no handicaps or obstacles placed in his way and any recommendations made that have been worth while have had the wholehearted support of the management.

MR. PAQUIN: May I ask Mr. Nichols how often an outside auditor comes in to check the books?

MR. NICHOLS: We have a very sketchy annual outside audit. Our company operates in a decentralized manner, with the factories

paying all of their own operating expenses, doing all of their own billing and collecting all of their own accounts. The general books, therefore, are based largely on reports from the factories. The outside auditors do not check the factories. They check only the general books. The responsibility for auditing the books of the factories is entirely in the hands of the controller.

CHAIRMAN DUNBAR: In that case, does the certificate of the outside auditors state those facts?

MR. NICHOLS: It could hardly be classed as a certificate. It is merely a statement that they have done certain work in connection with the general books of the company.

MR. GREEN: Mr. Chairman, since the treasurer of the company is its financial officer, having to do in particular with the disbursement of funds, I do not believe that the auditor should report to the treasurer. I feel that he should report to either the president or the controller.

MR. MARVIN: Referring back to the remark that Mr. Nichols made with respect to a sketchy outside audit, I would assume they must require a very efficient internal control on the expenditures of the factory; that is, that the internal auditing staff had proven itself to be extremely effective. I would like to ask if that is so, and if the internal auditing staff is well developed?

MR. NICHOLS: We think it is fairly well developed. We are not entirely satisfied with it, and are constantly studying our methods and procedures in an attempt to better them. Frankly, we are contemplating right now having one of our factories audited by outside accountants as a check on our own work. Incidentally, they have reviewed our procedure very carefully. They have made one or two suggestions which we have incorporated in our work. The results so far, at least, have borne out the fact that we apparently have things pretty well under control.

EMORY A. AUSTIN (*General Auditor, Hammermill Paper Co., Erie, Pa.*): I would like to ask the gentleman whether his company is listed on one of the exchanges, and therefore is reporting under SEC regulations?

MR. NICHOLS: I think the answer to that is obviously "No." Our stock is traded on the Curb on an unlisted basis.

HOWARD A. GIDDINGS (*Staff, Leach, Rindfleisch & Scott, Richmond, Va.*): I would like to pose this as a theoretical line-up of organization: The controller would be responsible for the development of all office routine and procedure, and for supervision over the collecting, compiling, and presentation of all accounting information, that is, for the actual execution and performance of those functions, headed up under the treasurer. Also reporting to the treasurer would be the internal audit division, which would check on the work of the several departments under the controller, and in some instances, on the work of some other departments not under the controller. Since the controller has charge of performance, I think it would be quite illogical to have him check his own work, although both he and the man responsible for the internal audit are connected with the financial division of the business and should both report to the treasurer. I propose that as a theoretical setup because I think Mr. Marvin has very clearly pointed out that there would be variations in every industry.

THOMAS E. HURNS (*Assistant Secretary, Detroit Edison Co., Detroit, Mich.*): I think Mr. Giddings has given an excellent definition of the duties of a controller and also of an internal auditor, but I think he should have them reporting, not to the treasurer, but each one of them to the president or the general manager.

CHAIRMAN DUNBAR: It is evident that there is still a difference of opinion as to the proper relationship between the various staff officers and what their functions should be, particularly the relationship between the internal auditor and the top accounting official, whether he be termed a controller, an assistant treasurer, chief accountant, chief auditor, or what have you. We will pass along and see if we can't thrash out some of these things a bit when we get further into the outline.

STANDARD INSTRUCTIONS, PROCEDURES AND MANUALS

CHAIRMAN DUNBAR: In organizing for effective internal control, what are some of the objectives and how may those objectives best

be attained? I have in mind, when I speak of internal control, the all-embracing layout, so to speak, of the plan and specification for operation of the business functions into which the accounting and internal audit must fit and become an integral part.

Does anybody wish to comment on what they are doing with regard to plans and procedures for internal control? To what extent, if any, are such procedures set forth in manuals or standard instructions, and by whom, if anyone, are such manuals or instructions prepared?

MR. BERGSTROM: Our internal audit program for regular or intermittent reviews and test checks is formulated and developed by the company's (internal) auditor and becomes effective when approved by the controller. The program is also submitted to the company's independent public accountants so that they may become familiar with the scope of the internal audit and be in a position to suggest any modifications which they may consider desirable.

In addition to the routine or periodic examinations prescribed in the program, special investigations are undertaken by the internal audit division. These investigations may be requested by the controller or any other official of the company. Instructions regarding the scope and conduct of such investigations are issued by the general auditor after consultation with the controller and other interested officials.

MR. GREEN: May I carry that just a step further? Under present-day conditions, I believe the auditing program can best be developed by having it reviewed and approved both by the controller and by the outside auditors. By obtaining the benefit of the diversified experience of the outside auditors and developing the program in line with their thoughts and suggestions, plus those of the controller, we insure a better auditing program, which will result in more complete and widespread coverage for the company.

CHAIRMAN DUNBAR: I think we should first discuss the internal control setup rather than the internal auditing features. A company or corporation usually has a set of by-laws, or rules and regulations which form the basis for its organization and operation. It departmentalizes the functions of management, under which all its activities function. Developing that thought further, certain procedures are devised to co-ordinate the workings of the business. Finally, we

build up accounting procedures to supplement those rules and regulations. That, in my opinion, is where internal control is established. Who develops these procedures in your company, Mr. Green?

MR. GREEN: In the Armstrong Cork Co. the controller's department is responsible for the preparation of the accounting manual, which covers all the various accounting functions. The audit manual is drawn up by the chief auditor, with the approval of the controller, and also, as I said, with the initial approval of the outside auditors. I believe that there is one thing that we can well afford to do in all accounting departments, and that is to have each accounting supervisor prepare in writing a working program of the functions and procedures under his immediate supervision so that he knows what his full responsibility is, how far it goes, and what fields it delves into; in other words, it provides a working picture of what he is really responsible for.

Beyond that, every person in his department should write out his conception of what his job really is and turn it over to his superior, who, in turn, edits it and develops a real working program for his particular accounting section. The program, in turn, if reviewed by the controller, can contribute to the accounting manual, to weld together a more effective set of accounting instructions.

CHAIRMAN DUNBAR: That is just the thought that I am trying to convey here—the distinction between the two terms, *internal control* and *internal audit*. In other words, Mr. Green has outlined how they set the foundation and lay out their plan of internal control procedure. It is probably developed and established by the higher supervisory group and adopted after consultation with the outside public accountants. We are now considering the method of getting the routines organized under which the business will function smoothly. Probably after giving some thought to this phase, we might then consider the organization setup from the standpoint of personnel. But let us discuss now accounting instructions, manuals and procedures, how they are developed and adopted. Has anybody anything to offer on this topic?

STEN G. NYBERG (*Controller, Graton & Knight Co., Worcester, Mass.*): I think it might be well to find out whether there are many companies represented here that have well-defined programs for insti-

tuting changes. It seems to me that in the smaller-sized, or medium-sized companies, many of these procedures and practices develop like Topsy and are not necessarily put down in writing; yet, they have the force and effect of a written manual. One of the reasons to which I ascribe the lack of discussion on this particular subject is that many of us do not have written manuals but develop procedure as we go along.

In one particular instance, we merely revised the procedure for handling the bank statements of branches so that they came to the home office instead of the branches. That was an internal control change that did not find its way into a manual, because as a matter of fact, we have no manual. I wonder if that is not a point to be noted before we consider accounting manuals.

CHAIRMAN DUNBAR: Let us have a show of hands first, to see how many we have here from industrial companies. (About 50) Those from public practice. (About 15)

Now, having in mind the group that are in industrial practice, could we have a show of hands on Mr. Nyberg's question of how many have accounting manuals or standard procedures with respect to accounting? (About 30) How many do not have these detailed procedures? (About 20) As Mr. Nyberg pointed out, certain procedures are adopted without being put in black and white, and they probably go along very well while the particular personnel are engaged in the routine; however, when you change the routine, you sometimes have difficulty.

I think that one of our responsibilities is to institute the policy of black and white routines and accounting manuals, in order to lessen misunderstandings between the internal accountant and the outside accountant, if we may use those terms.

MR. MARVIN: Mr. Chairman, I would like to see a little more emphasis placed on the necessity for building up routines. While you have that show of hands, I would like to have that point recorded.

CHAIRMAN DUNBAR: It has been taken down, Mr. Marvin, and that is what I am trying to develop here, a little more interest in this subject, which I think is of real importance at this time, particularly in the light of the events of the past few years.

What I am trying to do here is to stimulate a more lively interest in the relationship between the accountant in business and the public accountant who comes in on an audit. They ought to get together more often, say in the off-season, and discuss these routines before they are adopted. That is one way of avoiding any misunderstanding with respect to internal audit and control procedure. Does anyone wish to comment further on this?

PETER H. FLANIGAN, JR. (*Internal Auditor, General Electric Co., Schenectady, N. Y.*): I rather feel that it is the duty of the outside auditor, after he finishes his examination, to make such recommendations as to future procedures within the company as he feels are desirable, and then if the officials of the company do not see fit to follow his suggestions, that is their prerogative and responsibility, but at least I feel that the recommendation is part of his job. When he is called in to examine the books, if he finds that the procedures are either not furnishing sufficient information or that the information available is not suitable for him to decide whether or not the accounting policies are being satisfactorily followed, it is his job to make recommendations either to the accounting officials or the officials of the company, as to what changes he would advise. I would like to get somebody else's opinion if I am in error on that.

MR. MARVIN: I think the gentleman is absolutely right, and there is no question about that. The only difficulty arises in this—that the development of those procedures takes time. The man who is best able to develop the procedures is the head of the accounting department, whether he be called controller or general auditor.

While the recommendations can come from the outside accountant, I should think, if I were a controller, I would take the initiative and see that I had my procedures prescribed and my internal control recorded in a manual. It gives the outside accountant a lot of help and saves a lot of his time because he knows what duties should be performed under the routine and he can check up readily, but if he must constantly go to the controller to ask about the routine and there is nothing in writing to guide him, why, then it just takes more time and costs the client more money. I think that is what you must consider. It is an important phase of the public accountant's duty today.

CHAIRMAN DUNBAR: How many of the industrial accountants here would like to discuss that point with Mr. Marvin, inasmuch as the vote indicates that some of you may have been a little bit remiss in not getting your procedures in the shape in which they should be and in which the public accountant would like to see them? How about it, industrial accountants? Can you give us some of the reasons why you have not developed this phase of internal control a little more than you have to date?

SHERMAN M. CHANDLER (*Plant Accountant, Combustion Engineering Co., Inc., New York, N. Y.*): Mr. Chairman, I believe that it is not so much a matter of not having developed the routine control; it is just a case of laxity in not having recorded it in written form. We have all, more or less, in one way or another, developed procedures, but we have not laid them down definitely in the form of a manual.

MR. BERGSTROM: In my opinion the present emergency emphasizes the need for written procedures, whether written for the guidance of the internal auditing department or for any other department, because, as the volume of work imposed by the defense emergency taxes the personnel and equipment of the office departments to the limits of their capacity, there may be a tendency to take short cuts which seem harmless and desirable at the time, but which may eventually prove disastrous. This tendency would be curbed where rigid adherence to a written procedure is maintained, but would be extremely difficult to control where instructions are oral and unrecorded. Revisions in the original written procedure to provide for short cuts during temporary emergencies should be made, when considered absolutely necessary, only after approval by all responsible officials having an interest in the possible risks arising from curtailment of the program.

MR. GREEN: I should like to inject another thought here. Through the use of working instructions, accounting manuals and definite written programs for internal audit, you will find that there is a possibility for reduction of your auditing fee, because you eliminate some of the time the auditors have to take under average conditions.

JAMES F. CULLEN (*Auditor, Hood Rubber Co., Inc., Watertown, Mass.*): I would like to get back to Mr. Nyberg's remarks with which I fully agree. In the course of time, an organization builds up a procedure that may be backed up by a series of letters or written instructions which, if you took time to review and study and write up in a final fashion, might produce surprising results. It is the same sort of thing that might happen if you tried to write an article for the *N.A.C.A. Bulletin* on some aspect of your company's practice. When you attempt to put it down in black and white you begin to find out what your organization is doing, and sometimes you are very much surprised. For that reason, in addition to all the other reasons, I would be in favor of building up an accounting manual as a very important requirement of any organization, large or small.

CHAIRMAN DUNBAR: Thank you. If I may state this in summary, I think that we all agree that we should do a little more work with respect to putting into writing some of these procedures that we have had in letter or memorandum forms, in other words, prepare adequate accounting instructions, procedures or manuals.

MR. AUSTIN: I think that some of us realize that we ought to do these things, or would like to do them, but we also realize that some of our routines are not perfect. I think the emphasis should be put on perfecting the routines, if there is a question of time and expense involved, before we merely write something down so that the public accountants can check what we think we are doing.

MR. MARVIN: I should like to challenge one statement there, about letting the public accountants know what we are doing. The point that I think is important is that you have something in writing with which you can check your own routine from time to time.

It seems to me that the most important thing of all is to establish some method of reviewing your own routines, so that when you come to a point where you are not satisfied with the operation, you can check it step by step and then place the responsibility on the person who does not perform according to routine. That, I think, is the danger of not having a written routine. Somebody will say, "I didn't know anything about that," but if he has the routine on his desk and he does not perform, you immediately point to it and say, "Why didn't

you?" You place responsibility specifically within your organization by virtue of these written routines.

MR. AUSTIN: I agree thoroughly with Mr. Marvin, but I merely want to place emphasis on the fact that with all the work that has to be done, if you do not have time to do everything, the improvement of procedures should come first.

ORGANIZATION FOR EFFECTIVE INTERNAL AUDIT

CHAIRMAN DUNBAR: Passing on to the term, "effective internal audit," we will assume that we have the manuals in good shape and that they meet the necessary requirements of both the outside accountants and ourselves. Should there be a department or individual charged with the duty of internal auditing? We have touched on that a bit. What type of personnel is required? What attitude should the internal auditing staff assume in their relation to other departments? What are the main objectives of an effective internal audit program? And last, what should be the nature and frequency of reports of internal auditors, and to whom should they be submitted?

I should like to have some discussion on these questions.

MR. PAQUIN: Mr. Chairman, I should like to make a suggestion. There is no question but that we shall run short of time, and I should like to hear a discussion of current practice, item 6 on your outline, which is very important, and spend less time on the organization phase of the subject.

CHAIRMAN DUNBAR: It is your meeting. Does anyone have anything to say on organization? Perhaps we can pass that up.

MR. AUSTIN: May I suggest that you summarize what has already been said on this point?

CHAIRMAN DUNBAR: Well, I will try to summarize it, supplementing the remarks with my own opinions. It will depend, as we have already agreed, on the size of the business, whether or not there should be a separate department or individual charged with the duty of internal auditing. I think the better way is to have a department

or individual charged with the duty of internal auditing, but the size of the department is another question. If one cannot have an internal auditing department, it may be possible to assign an individual or two to look after this function on part or full time. I think in the smaller-sized companies, generally, they would have, in addition, other responsibilities. I think that this was very well covered in the article by Mr. Wolf, to which I referred previously.

Of course, the choosing of the proper personnel is very important. You should emphasize the use of tact to those engaged in this type of work. That is an important characteristic when dealing with other people, especially when auditing their work. I think we ought to adopt some of the methods of training personnel practiced by the outside public accountants and insist that those engaged in the work of internal auditing conduct themselves accordingly, because, after all, the internal auditor is charged with a responsibility, to perform to the best of his ability, a function of management. Effective internal auditing, we realize, has been stressed in recent years. Let us assume the attitude consistent with the responsibility.

Under some of the main objectives of an effective internal auditing program, I should say that the internal auditor or his department should see that the accounting procedures and/or manual as adopted by the company are carried out in actual, everyday practice, not by any superficial tests, but by actually conducting a well planned auditing program.

This should, of course, be tied in with the outside independent audit, thus utilizing the time and services of the independent public accountant to the best advantage. The internal auditor should prepare his reports and working papers for easy reference by independent public accountants, and should attempt to conform as nearly as possible to those standards by which the public accountant develops his working papers.

CURRENT PRACTICES

CHAIRMAN DUNBAR: Does anyone wish to comment on anything I have said? If not, we will proceed with a review of some current practices, "how we do it," concerning the methods of internal control and audit. Listed on the outline are four or five items. The first is "Purchases, accounts payable and cash disbursements." In connection with that, I wish to start the discussion by referring to the

N.A.C.A. *Year Book* for 1936 in which Charles W. Tucker stated, with respect to disbursements, "A properly conceived set of 'Disbursement Regulations,' setting forth in detail all possible types of expenditures, and indicating clearly the approvals required before cash may be disbursed, will, if rigidly adhered to by the accounts payable and internal auditing departments, prove to be one of the most valuable pieces of administrative mechanics in use anywhere in business." I think that is a very fine statement.

MR. BERGSTROM: I would like to know how the internal auditing department can satisfy itself that the company is not paying more than necessary for material or more than a comparable purchaser or competitor.

MR. AUSTIN: It seems to me that is the function of the purchasing department, not the accounting department.

MR. BERGSTROM: Isn't it a proper function of the internal auditing division?

MR. GREEN: I agree with the statement that it is the function of the internal auditing section. One way, possibly, of handling it would be to contact other firms. If you are buying cartons, for example, secure quotations from firms who are selling cartons to see if your purchasing agent is paying too much, and there exists the possibility of his getting a cut from the vendor.

CHAIRMAN DUNBAR: Wouldn't your purchasing procedures contain some reference with respect to how you should examine the bids on items that you have in mind?

MR. BERGSTROM: How can we determine that the prices which are being bid are not being padded?

MR. SYMES: In our company we have been pondering this same problem and, as a matter of fact, we have not as yet found a solution to it. However, the internal purchasing procedure calls for the buyer submitting bids to his supervisor for approval. Large orders are generally purchased on a competitive basis and the buyer must submit to his supervisor a summary sheet showing the different bids ob-

tained and the reasons for his selection of certain items or certain vendors. After the purchases have been made, records are compiled by the purchasing department showing the price, vendor, etc., of each item purchased.

These are matters of record that an internal auditor or an independent auditor can refer to, checking the prices of purchases with similar items from other firms. But as to whether the purchasing agent or the buyer is receiving rebates, I don't know how you could check on that. If anybody has a solution, I would like to hear it.

MR. BERGSTROM: I doubt very much whether other purchasers, particularly competitors, would care to divulge the prices they pay for certain material, as such information is usually held very confidential. The suggestion that prices be checked in this manner is therefore impracticable, in my opinion, under normal circumstances.

CHAIRMAN DUNBAR: Is this item of materials something that would be used by a specific department?

MR. BERGSTROM: Let us say that it was for the factory.

CHAIRMAN DUNBAR: The factory, then, would specify the type of material desired. Is it the practice in your company for the purchasing department to get several prices on that material?

MR. BERGSTROM: Yes.

CHAIRMAN DUNBAR: And are samples submitted to the department heads for approval before the purchase order is placed?

MR. BERGSTROM: They may be.

MR. GIDDINGS: I think that is one of the most difficult things to deal with in the whole range of auditing, and if there is any method that has ever been developed for adequately checking on that point, I would like very much to hear of it.

I have never heard of anyone who had a foolproof method, but I am inclined to think that something that could be done is for the controller or his representative to keep an eye on the purchases, quietly and carefully. For example, if he notices that the purchasing depart-

ment is purchasing a certain class of supply almost exclusively from one supplier, that is a red flag to him to look into the matter and see whether or not there is collusion. There are other means which he might use based upon his own individual methods, observation and study.

CHAIRMAN DUNBAR: Could we have a show of hands from the industrial men present on whether or not the accounting department in its internal auditing program has as a function the checking of bids obtained by the purchasing department? How many say "Yes"? (About 8) How many, "No"? (A majority) Well, I guess the purchasing agents are in the driver's seat. Here is a problem for the internal auditor to solve.

ALBERT J. BUCKENMYER (*Assistant Secretary-Treasurer, Surface Combustion Corp., Toledo, Ohio*): I just want to add that there might be some additional complications when you are dealing with a custom-built product where you have specifications originate for the most part in the engineering department rather than in the purchasing department.

CHAIRMAN DUNBAR: Yes, that is true.

MR. MARVIN: This gentleman has one of the most difficult problems of the accounting division. There are some industries—I have in mind one or two—where the controller's department does keep a record of prices from month to month, so that they have some basis of comparison on each type of material purchased regularly.

Another way of checking, particularly on larger materials, is that your engineering department, in making up its specifications for larger repairs and new construction parts, generally has available the base prices for the materials to be used, and certainly, if the purchasing department's figures go beyond what the engineering department says they should be, it should be referred back to the engineering department or the controller's department for investigation. You can keep a fairly accurate check on the larger additions and betterments, by virtue of that method.

MR. SHILTS: As far as your basis for pricing materials is concerned, one always has access to trade journals and newspapers. This

applies particularly to metals, various kinds of silk and commodities of that type. You can get that information from the trade journals and also from the newspapers, and you can also get catalogs of machinery parts which can give you some idea of the right prices.

JAMES A. SHANAHAN (*Public Accountant, Manchester, N. H.*): I think that question is particularly acute where the purchasing is decentralized. I have one case in mind where the purchasing agents in each plant are required to send their prices or bids to a central organization which checks them. That acts as a sort of internal audit in itself.

CHAIRMAN DUNBAR: That is a good point.

ALFRED E. SIEG (*Cost Accountant, Federal Mogul Corp., Detroit, Mich.*): I might bring out the point that in large purchases of raw materials, our purchasing agent usually takes it up with the treasurer before there is any purchase made at all. They go over the prices and at the same time establish the quality and quantity of material that they are going to order.

WILLIAM M. TRANT (*Secretary and Treasurer, Holly Sugar Corp., Colorado Springs, Colo.*): I think that there is not so much need for worry now as there used to be before the Robinson-Patman Act was passed because under that Act both the receiver of the rebate and the giver are subject to prosecution.

CHAIRMAN DUNBAR: Do we wish to discuss anything further under the title of cash receipts and accounts receivable? Is there anything that you want to get off your mind?

ERNEST A. DAVIS (*Manager, Sales Accounting Dept., Pitney-Bowes Postage Meter Co., Stamford, Conn.*): I would like to ask if there is anyone present who feels that his company, through an internal audit program, is actually saving money? Are your total auditing costs less; are you getting an internal audit which the outside auditors will accept and incorporate in their reports without elaborate checking? In other words, in a company without an internal auditing department, would we save money or spend more money if we added the internal auditing function?

CHAIRMAN DUNBAR: I should say that you would have to analyze the particular set of circumstances. The question of whether you should or should not, I think, depends entirely on what benefit you are going to receive out of it. I think that is a case where each situation must be analyzed by itself.

MR. DAVIS: Perhaps I did not make myself clear. I think that I did have a question that might be answered from the floor, and that is whether anyone present feels that having an internal audit has reduced the expense of the necessary external audit?

CHAIRMAN DUNBAR: I wonder if you would mind holding your question until we get to the place in the outline dealing with the relationship between the external and the internal auditor, when we will take that up. We are discussing now methods for internally auditing cash receipts and accounts receivable.

I would like to throw out as another quotation from the 1936 *Year Book* a statement from Charles Tucker's paper. He said: "A sale is not completed until the money is in the till. From a strictly technical accounting and legal standpoint, I know such a statement is inaccurate; but from a profitable business control viewpoint, there is a lot to be said in its favor." How many agree with that statement of Charlie Tucker's? In other words, is it the accountant's function to follow the transaction through? It is not simply a matter of recording the sale on the books, but the proper and full collection of it is also our responsibility.

The next two items are cash receipts and inventories. Has anybody any thoughts on these subjects?

MR. BERGSTROM: Our internal auditing division, assisted by members of the accounting department, has for some years past made comprehensive tests of the accuracy of the counts made by the factory inventory counters. A relatively small percentage of the test recounts are made in the presence of representatives of our public accountants. Their observance of the execution of the prescribed inventory-taking procedures, together with a detailed report on the results of the recounts made by the internal auditing staff, has enabled them to arrive at conclusions regarding the accuracy of the physical counts with comparatively little direct checking being done by their representatives.

CHAIRMAN DUNBAR: Let us analyze this problem of inventories from the audit and control standpoint. First, how many companies represented here take a physical inventory annually at a set day? (About 30) How many companies take an inventory by continuously checking a certain part of the stock every month, dispensing with the annual inventory at a set date? (About 6 or 7) I guess we are in the minority.

MR. GREEN: Isn't it true that some companies will do both? It depends on the circumstances. I know we do. We take monthly, semi-annual, and yearly inventories, but we also have the continuous check method in use, depending upon the particular circumstances involved.

CHAIRMAN DUNBAR: What I am leading up to is this question: When the independent public accountant comes in at the end of the fiscal year he either observes the taking of the physical inventory or takes the figures and facts from the records and test-checks them. But what about the inventory which is continuously checked? In the cases where this plan is followed, does the independent public accountant accept the figures and facts presented to him by the internal auditor?

MR. HURNS: In our case the outside auditor does not take a physical inventory, but checks a substantial portion of the charges and credits to our inventory records and observes the physical inventory taken by our employees. The outside auditors also test-check certain items in the physical inventory.

MR. GREEN: In the case of finished stock, we endeavor wherever possible to run a system of continuous check throughout the year, marking the inventory record in some manner to show which items have been physically checked and what the result was. When the outside auditor comes in at the end of the year, he puts in only a fraction of the time in reviewing inventories, that would be necessary without the system of continuous check.

CHAIRMAN DUNBAR: Do I understand that in addition to the continuous check you take an inventory at the end of the year?

MR. GREEN: We use both methods in our company, depending, of course, on the ability to measure or control the various items of raw material, work in process and finished stock, but we do not take physical inventories of those items for which there is in effect a system of continuous physical check unless such inventories are felt to have been given insufficient coverage during the year.

THOMAS H. BUCKLEY (*Auditor, Public Service Co. of New Hampshire, Manchester, N. H.*): Each year our outside accountants check the inventories at different points in our system. They go to different parts of the storeroom each year and inventory both operating and resale supplies themselves. For the rest, they examine the Company's inventory and any adjustments we have made in them.

SUPPLEMENTARY REQUISITES TO EFFECTIVE CONTROL

CHAIRMAN DUNBAR: We will pass along now to the next point. I would like to get some reaction to those items with reference to supplementary requisites to an effective internal control and audit program. The first is the proper application of machine accounting and other equipment aids. Just to offer a point for discussion, I would suggest that machine accounting offers great possibilities for better control of accounting and financial data, provided the importance of internal audit is not lost sight of in the scramble to effect a good picture from the standpoint of the machine accounting record.

MR. NYBERG: I think we have very definitely considered that aspect of it in our company. Where we find that the machine does not present the reports in the shape in which we want them, we consider it a very serious defect on the part of machine accounting itself. We recently made an installation of machines for payroll purposes. Due to the capacity of the machine, we could not get all the deductions on our registers and had to summarize a few of them. But in doing that, we very carefully considered where we could find that information if it were needed. We have tried to follow that idea through, so that we had some other means of checking it, to find out whether or not the reports that were coming off the machine would give us the data in the desired form.

CHAIRMAN DUNBAR: Now let us take up the next item—preservation of records and uniform procedures with respect to destruc-

tion of records. The need for systematic planning for the preservation of basic records to meet the demands of management is another matter which requires the special attention of those responsible for accounting. The problems of valuation, taxation, litigation and similar other matters must be met by prompt reference to the proper records, and this need has been emphasized forcibly in recent years by the rigid retention requirements for records imposed by regulatory authorities.

This particular subject is one to which the accountants of the transit industry have given quite a little thought in recent years, and the conclusion has been reached that any plan for identifying, indexing and preservation of records to meet managerial needs and regulatory requirements centers around the development of a record index designed to co-ordinate the identification of records with their physical locations in one or more orderly arranged record rooms.

Has this topic been treated with sufficient respect by the internal auditor of today? In other words, does the internal auditor or those charged with that responsibility take into consideration this matter of preservation of records? Who has something to offer on that subject?

MR. HURNS: We have handled that problem in our company by having a committee, a records destruction committee, that has been functioning for many years, long before we even had an internal auditor, recognized as such. This committee is composed of the secretary, the treasurer, the controller, the auditor and one representative each from the legal and sales departments of the company. They establish a destruction date for all records that go into our filing vaults.

CHAIRMAN DUNBAR: I wonder if the industrial accountants would show their hands to indicate that they maintain such a setup to cover the preservation of the records? (About 30) How many have not given it any attention? (Quite a number.)

MR. BUCKENMYER: In arranging a program for the destruction of records, there is also, it seems to me, a disposition to have too great a number labeled as permanent, and I am wondering if any of you have set up a program under which no records are considered permanent.

MR. FLANIGAN: Mr. Chairman, I feel that the preservation of records is important. I also feel, with Mr. Buckenmyer, that the destruction of records is highly important, because you can clutter up your files to the degree that you cannot find what you have, or the exorbitant expense does not warrant keeping a lot of the information which has become practically valueless.

On the other hand, there are certain items which should be kept more or less permanently. I have in mind those records which have to do with investigations leading to patents and permanent items of plant investment, where the item in itself is still in existence and has not been physically scrapped, and that sort of thing. I think that a number of records are more or less permanent, although many of them could be destroyed at an earlier date.

MR. BUCKENMYER: One set of records I have in mind happens to be particularly bulky, and that is vouchers payable. I wonder if anybody would want to name a minimum date when it would be safe to destroy vouchers?

CHAIRMAN DUNBAR: Does anybody have any suggestions with respect to the length of time vouchers payable ought to be retained?

MR. HURNS: Our practice is to keep all vouchers, but a plan has been considered for retaining permanently all vouchers covering charges to plant investment accounts and payment of taxes. The rest of the vouchers payable would be destroyed after a period of about seven years.

CHAIRMAN DUNBAR: You are guided by the statute of limitations? Does that have any bearing on your program?

MR. HURNS: Yes.

MR. FLANIGAN: I think the acceptance of your tax report by the Bureau of Internal Revenue places a limited life on a number of your accounts payable vouchers.

MR. GREEN: That is true of the federal reports, but for state reports you do not often get an acceptance, so you should hold your

vouchers in that case. I think, further, that it is the function of the internal auditing staff to see that your retention of records schedule is complied with.

MR. BUCKENMYER: Vouchers covering purchase of plant and equipment items and a lot of other items may be necessary to establish a valuation for capital stock under the present excess profits tax. In some cases you may have to go back to the beginning of the company for basic, original data.

MR. BUCKLEY: The Federal Power Commission and various state regulatory commissions have prescribed routines for the destruction of records. They cover about every phase of the record you can think of and state just how long you shall keep each item or when you can destroy it. That may be of some interest. You can get a copy, I think, by applying to the Federal Power Commission.

CHAIRMAN DUNBAR: The Bureau of Motor Carriers recently promulgated a very rigid system for the preservation of records affecting the motor truck industry and the bus transportation companies operating interstate and coming under their jurisdiction.

Let's move along now. We want to try to complete the outline, if you are willing to stay. I have an item here to which I would like to get some reaction. How many prepare a statement of sources and application of funds? (About 15) How many do not give any attention to the source and application of funds statement? (None) Well, assuming that all do, does anyone wish to comment on whether that form of statement ought to be developed by the internal auditor? He brings a fresh viewpoint to its interpretation since he is not directly concerned with the routine bookkeeping transactions. This statement covers the transactions where any possible fraud or misappropriation of moneys might be found.

MR. TOWNS: It seems to me that it is desirable for the internal auditor to work on the basis of reviewing or rechecking all of the financial statements that are prepared, including the statement of sources and application of funds.

In this connection, I think he should check to see just what statements go to the management and at what times.

RELATIONSHIP BETWEEN INTERNAL AND EXTERNAL AUDITORS

CHAIRMAN DUNBAR: The next and last item here is the relationship between the internal and external auditors. How should the activities of these two groups be co-ordinated to assure both efficiency and economy of management?

MR. GREEN: I would like to comment on that. Two years ago, we adopted a policy of co-ordination or co-operation with our outside auditors, as follows: The internal auditing staff is responsible for methods and procedures, and the external staff is responsible for valuation. By doing this, we have been able to give the company greater audit coverage for the same cost, and in some cases, with less cost. I think that this sort of thing is going to be more and more important as we go along, and probably one thing to which you can attribute it more than anything else is the McKesson & Robbins case of a few years ago.

MR. SHILTS: I think that one point that is often overlooked in talking of the functions of an internal audit staff is that the staff may prepare many schedules for the use of the public accountants. Examples are analyses of property accounts, deferred charges and accounts receivable, as well as certain reconciliations of bank accounts.

CHAIRMAN DUNBAR: Couldn't the auditing program, both the internal and the outside auditing program, be on a co-operative basis, and arrangement be made by conference beforehand as to the phases of work to be covered by both?

MR. SHILTS: Yes.

CHAIRMAN DUNBAR: As a matter of fact, how many do that? All those who work on a co-operative plan, please raise your hands. (About 20) Those who do not? (None) I guess we are all in harmony, then.

What has brought about the interest of the outside auditor in internal auditing? Some remarks from the public accountants present would be welcome.

WILLIAM L. KEATING (*Partner, Miller, Donaldson & Co., New York, N. Y.*): We have always been interested in the internal audit.

Also, some of us had been making tests of physical inventories for many years. But as to increased interest in internal auditing, the cause is no secret; it was the famous McKesson & Robbins case.

CHAIRMAN DUNBAR: The new form of certificate includes a statement to the effect that the outside accountant has reviewed the system of internal control and the accounting procedures of the company by methods and to the extent that they deem appropriate. Does that constitute something new on the part of the independent public accountant inasmuch as it is now contained in the new form of certificate?

MR. KEATING: Yes, there have been improvements in the form of the short report or certificates. These have resulted from conferences with, and suggestions from, various bodies. We have never claimed perfection, though some elements of the public, perhaps, attributed that virtue to us, without our knowledge or consent. However, we are anxious to be as perfect in our profession as is humanly possible. For that reason certified public accountants have aspired to improve procedure and reports to attain a greater degree of perfection.

There has been an element of risk that perhaps had not loomed large on our horizon—that four of the individuals at the top of a large enterprise would deliberately set out in collusion to scuttle their ship. It happened; and for that reason, drawing upon the experiences of accountants of corporations, the Stock Exchange, the SEC, and every certified public accountant in the country, there has been worked out, we feel—and hope you do—a co-operative effort between all accountants to tighten up this situation.

We think we have made some headway, but just as the steel surrounding the battleship is pierced by new developments in projectiles, and again improved, this sort of thing is going to go on as long as we, and those who follow us, live. This kind of a conference brings out an interchange of ideas that enables us to get a little closer to perfection.

In order not to close on a note of generalities, we can take as a practical example a company that spends forty million a year. They have a system of internal audit. The outside accountants, before they come in, designate exactly on which accounts and to what extent

they wish to have details, and then the tabulating department runs off thousands of the exact items that have been selected for audit. There should be no question where the responsibility begins and where it ends. The result is that responsibility to the stockholders on the part of management, the accounting department of the corporation, the public accountants, the Stock Exchange, and the SEC are better discharged and satisfied.

CHAIRMAN DUNBAR: That is a very fine contribution, Mr. Keating. The point I think Mr. Keating wants to emphasize is that we must continue to exchange our views so that there will be a better understanding of the terms relating to internal audit and internal control. That is why I have listed here on the outline as the last question, in the hope that it would be the opinion of those present, the statement: "Is it not the responsibility of management to protect the certificate of the outside auditor by means of an effective system of internal control and audit which meets the requirements of accepted accounting practice?" We will now call this discussion group adjourned.

... The meeting adjourned at five-thirty o'clock ...

EVALUATION OF INVENTORY CONTROL METHODS

Chairman: WYMAN P. FISKE

Professor of Accounting, Massachusetts Institute of Technology,
Cambridge, Mass.

CHAIRMAN FISKE: Gentlemen, my part in this session is going to be very brief. I believe you all have, or should have, a discussion outline, which was prepared primarily to suggest ideas.

I found it rather difficult to classify the subject in any really logical way without overlapping and without raising the problem of discussing under one heading something which also comes under another heading. The outline is not intended to be complete and I do not believe it is going to be possible to follow it slavishly with any advantage, because there are certain topics which will naturally come up under two or more headings.

I would suggest that by inventory control methods we intend to cover not only the mechanical methods, which is one important phase of it, but that we recognize carefully the distinction between the problem of the management of the inventory, i.e., policies, and the problem of the control, i.e., trying to insure that policies are carried out in actual fact as management intended. It seems to me that the policy-making side is not only important, but that it is essential that it be kept in mind by those who are carrying it out in order that what they do may have some meaning.

I have set out in the outline five subheadings. I have already referred to one subheading. Subheading II presents the areas of management and control divided between the several classes of control, and the problems which arise in certain sections or parts of the inventory. Subheading III is concerned with control methods. I do not believe that in the discussion, subdivisions II and III can be kept apart. If we get into one, we are going to get into the other, and we might as well recognize at the beginning that we will have to take them up more or less together.

Subheading IV presents the problem of adjustment of the inventory to fluctuating volume and prospects, and subheading V, the problem of control responsibility: i.e., Who is going to do the job? Where in the organization and where in the physical plant is the job to be done?

I think Subheading V might be a good place to start our discussion. Assuming that we have a problem of inventory management and a problem of inventory control under a policy which we have decided upon, who should do the job? I know that the job is done in different places. It seems to me that one of the greatest advantages that we can get out of this discussion is to have stated, in the form of experience, the reasons why a particular approach has been taken in a particular plant. I think those reasons will be the most useful thing that we can bring out for the rest of us. Let's have some discussion from different individuals who have various approaches as to why they have taken it and perhaps a show of hands as to the location in different places.

Under control responsibility we have, first, the problem of the location of the responsibility. Who is the individual responsible for inventories in your plant? I listed five possibilities, the last one being a miscellaneous catch-all. Will someone volunteer information on their own setup and why they do it?

DISCUSSION OUTLINE

EVALUATION OF INVENTORY CONTROL METHODS

- I. INVENTORY CONTROL VS. INVENTORY MANAGEMENT
 - (a) Inventory management—policy making
 - (b) Inventory control—carrying out the policy
- II. AREAS OF MANAGEMENT AND CONTROL
 - (a) Problems of control
 - 1. The total size of the inventory
 - 2. The detail make-up of the inventory
 - 3. Balance in the inventory—relative proportions of different parts and sections of the inventory
 - 4. Style and obsolescence
 - (b) Parts of inventory
 - 1. Raw materials—major
 - 2. Raw materials—minor
 - 3. Goods-in-process
 - 4. Finished goods
 - 5. Supplies
- III. CONTROL METHODS
 - (a) Purchase control
 - 1. Budgetary approach (open-to-buy in department stores)
 - 2. Purchase releases under production budget—production planning and scheduling
 - 3. Purchase to sales order requirements
 - (b) Inventory records
 - 1. Types
 - 2. Location
 - (c) Inventory reports
 - 1. Types and for whom prepared
 - 2. Frequency
 - 3. Dollars or units
- IV. ADJUSTMENT TO FLUCTUATING VOLUME AND PROSPECTS
- V. CONTROL RESPONSIBILITY
 - (a) Location of control responsibility
(Differentiate this sharply from location of responsibility for inventory record keeping.)
 - 1. Controller's office
 - 2. Production department
 - 3. Sales department
 - 4. Inventory or budget committee
 - 5. Other
 - (b) Location of responsibility for initiation of procurement orders
 - (c) Accomplishment of management co-ordination of conflicting interests
 - (d) Responsibility for balance

RESPONSIBILITY FOR INVENTORY CONTROL

THOMAS H. PATTERSON (*Chief Cost Accountant, Armstrong Cork Co., Lancaster, Pa.*): In our company, the responsibility for the physical control of the inventory lies with the production department through a branch of that department which we call the scheduling department. They schedule production, watch the amount of inventory on hand compared with sales volume, and are responsible to the production head for maintaining a fair amount of goods and low inventory.

We think it is a good setup because they have to schedule the production in the first place and we feel that if they are responsible for quantity of inventory, it makes a better scheduling job.

CHAIRMAN FISKE: While you are on your feet, let me throw item C at you. If you place responsibility for the inventory in the production department, how do you accomplish a co-ordination of the conflicting interests? Presumably, the sales department is interested in your inventory, at least in certain directions; presumably, the treasurer is also interested. How do you accomplish that co-ordination?

MR. PATTERSON: That accomplishment is effected through a committee.

CHAIRMAN FISKE: You have an inventory committee?

MR. PATTERSON: Yes, sir; we call it an executive committee, which handles other problems of a similar nature. It is composed of the representatives of the president's office, sales department and production. They iron out the difficulties there.

CHAIRMAN FISKE: Is that merely for the ironing out of differences, or does that inventory committee set the desired size of the inventory and its breakdown, and so forth?

MR. PATTERSON: I am not completely sure as to that. I know that major policies are developed there and certainly the ones affecting inventory to a large extent would develop there first, before they were carried into effect.

CHAIRMAN FISKE: At least under that committee the responsibility is in the production department?

MR. PATTERSON: Yes.

HERBERT J. MYERS: (*Controller, Farnsworth Television & Radio Corp., Fort Wayne, Ind.*): We handle our inventory problem in very much the same way, with one point of difference. We have emphasized budgeting inventories. I haven't heard much about that, but I would like to make a point of it. We budget inventories just as we budget expenses, in the same manner as we budget labor. We budget inventory, particularly of work in process, because we find that it is such an important factor in keeping a level of operation in our plant.

We budget finished-goods inventories as well as work-in-process inventories, one being dependent upon the other. I would like to make a point of the budgeting of inventories and if anyone has had any experience with it I would like to hear some comment.

CHAIRMAN FISKE: I think perhaps we ought to leave the detail of the budget approach until a little bit later. Do I understand you have approximately the same approach? You have a committee which sets the policy and the detail is carried out in the production department?

MR. MYERS: The budget committee is responsible.

CHAIRMAN FISKE: For the amount and make-up of the inventory?

MR. MYERS: Yes.

H. D. STEHMAN: (*Assistant Controller, Armstrong Cork Co., Lancaster, Pa.*): I would like to modify Mr. Patterson's statement. We are both employed by the same company. Our inventory control to a certain extent is under what we call the forecasting committee. That forecasting committee is made up of the treasurer, the sales manager, the controller, the economist, and the head of production planning. They determine first what the future holds in regard to sales and, of course, from the expected sales determine inventory requirements.

ALFRED G. BLOCK (*Secretary and Treasurer, Barnes Drill Co., Rockford, Ill.*): These gentlemen have explained the point very clearly, but it would be interesting to know who is responsible for maintaining the records of that inventory. They have a controller; I would be interested in knowing whether the keeping of that record is under the controller or if that also is in the hands of the production department.

CHAIRMAN FISKE: Do you want to comment on that, Mr. Patterson? You say your production department runs it. What does the accounting department have to say as to the type of record?

MR. PATTERSON: In our company, the controller's department is responsible for the records of the inventory and the arrangement thereof.

CHAIRMAN FISKE: Let us be careful to define what we mean here. When you say they are responsible for it, what does that responsibility mean? That it is done in the production department by employees of the production department?

MR. PATTERSON: No; I mean that the controller's department has responsibility for the other phase of inventory valuation. We develop a fair valuation for the products and trace the movement of the stock and supply balances to whoever is concerned with the balances.

As I take it, this question is concerned with two phases. Who accounts for the value and who takes care of the physical inventory size and assortment, and so on? The assortment is handled in the production department and the accounting in the controller's department.

CHAIRMAN FISKE: Does that settle the argument?

MR. STEHMAN: The forecasting committee determines the expected sales from which we derive our raw material requirements. The head of the scheduling department informs the purchasing agent as to the requirements of raw materials, and after the raw materials are received it again is the responsibility of the scheduling department to inform the factory of the kind and quantity of commodities to be produced.

CHAIRMAN FISKE: Does anybody here represent a company where the inventory responsibility is not in the production or controller's department?

LEONARD E. ZASTROW (*Assistant Controller, Bucyrus-Erie Co., South Milwaukee, Wis.*): Our inventory control is handled somewhat differently. We have appointed a supervisor of stock control, reporting to the vice president in charge of finance. We did that particularly in order to avoid these conflicting interests. The purchasing department always buys raw material far enough ahead to take care of every contingency. The manufacturing department is always asking for material enough to last twice as long as they need it, and the sales department is always pushing the manufacturing department. So we appointed a supervisor of stock control who reports to the vice president in charge of finance. He is not responsible to any other department. It is his duty to obtain manufacture releases from the officers of the company, that is, the president, the vice president in charge of finance, the vice president in charge of sales and engineering, and the vice president in charge of manufacturing.

The supervisor of stock, after he gets his releases, must then determine what raw material he needs. Then he makes his releases to the manufacturing department, and they produce what he calls for. That involves a steel foundry, a structural department, a machining department, an assembly department and a shipping department.

CLINTON J. NORRIS (*Chief Cost Accountant, Intertype Corp., Brooklyn, N. Y.*): I would like to know how this supervisor of inventory gets his reports.

MR. ZASTROW: What report do you mean?

MR. NORRIS: To control both sides; how he makes his decisions, where he gets his information from.

MR. ZASTROW: First of all, he receives a release from the officers of the company authorizing the manufacture of ten machines of this size or five machines of that size or one machine of this size. That, of course, is his starting point. Then he must himself determine what he is going to need to make those machines. That is his job.

MR. NORRIS: That is the point I want cleared up. How can he determine that?

MR. ZASTROW: He refers the matter to the engineering department and they tell him what he needs to make that machine. He gets those releases from the engineering department.

SPECULATION IN RAW MATERIAL

WILLIAM T. BOWKER (*Plant Auditor, The Celotex Corp., New Orleans, La.*): I have been very much impressed, speaking as a plant auditor of a rather small plant located in a distant part of the United States, with all these committees and vice presidents and other such persons who seem to have something to do with economy control. I am from a plant that uses up about \$6,000,000 worth of raw materials a year and I suppose, strictly speaking, we don't have any inventory control as such. Our principal raw material is acquired by one department known as the field department. At the beginning of our year we know how much we must have and the field department goes out and buys it. The purchasing department figures about how much they are going to need and has charge of the stores and other raw materials. The purchasing agent goes out and buys them.

The sales department makes a forecast about once a year of what they expect to sell and the production department figures out about how much they expect to make, which at the present time is everything they can make. Each department more or less goes along on its own resources and the controller's department, represented by myself, has complete charge of all inventory records and reports.

I was just wondering, in learning about all of these high-powered organizations to control inventory, how many of you are in the same fix I am in.

CHAIRMAN FISKE: I might ask, do they ever get together, either before or after it is over?

Does anybody want to add any comment or make any suggestion on that? It seems to me that there has been a point raised here that is interesting. In a good many companies making more or less non-standardized materials but using one or two basic raw materials there is either admittedly or in fact a certain amount of raw material speculation. Does anybody have any experience with that? Who decides

how much the company is going to buy, and when? That certainly is a factor in the control of the inventory. Doesn't anybody admit to that sort of a situation?

HAROLD J. KENDALL: (*Office Manager & Auditor, Paterson Parchment Paper Co., Bristol, Pa.*): We have a meeting of the board of directors which decides on how much inventory they are going to buy. In our line recently, due to the war, a lot of raw materials cannot be purchased. Naturally, we had to buy ahead.

CHAIRMAN FISKE: It is done through the board of directors?

MR. KENDALL: The whole board of directors decides.

CHAIRMAN FISKE: That is the normal approach to the control of that speculative operation.

MR. ZASTROW: May I ask how many comprise the board of directors?

MR. KENDALL: Fourteen.

CHAIRMAN FISKE: Is it the board of directors or an executive committee that does it?

MR. KENDALL: The board of directors.

CHAIRMAN FISKE: Is it an officer board or an outside board?

MR. KENDALL: It is a closed corporation.

CHAIRMAN FISKE: The board of directors is practically the management, then?

MR. KENDALL: Yes.

DETAIL CONTROL METHODS

CHAIRMAN FISKE: I would like to have some comment, if possible, on item (b). I would make a distinction between the problem of

the total size of the inventory and its detailed makeup. That difference I have tried to indicate by using the term "balance." Who is responsible for maintaining a proper balance in the inventory? How much of each different type of material and how much of the several parts such as raw material, goods in process and finished goods, are we going to have? Who decides that? Is there somebody here who has an important problem of that type?

DONALD G. ROBBINS, JR.: (*Accountant, Singer Mfg. Co., Bridgeport, Conn.*): We have quite a problem in finished goods due to a large variety of machines. Machine requirements are set by the works manager and the assistant works manager of the particular factory and these are broken down from engineering specifications into the inventory requirements. The details of placing the manufacturing orders are handled in the production department, but the control is with the works manager and his assistant.

CHAIRMAN FISKE: You mean control of the number of each different type of machine?

MR. ROBBINS: No; how much stock we will carry for each particular type of machine, plus the machines themselves.

CHAIRMAN FISKE: Do you carry completed machines or parts?

MR. ROBBINS: Both.

CHAIRMAN FISKE: And the same people decide whether it shall be in the form of parts or completed machines?

MR. ROBBINS: Yes. Most of the parts are built for stock and the machines are an assembly from finished stock. It is a very small step from the completed part to the finished machine. Parts really are the problem because of the long manufacturing cycle.

CARL H. GRASHOF (*Controller's Office, Eastman Kodak Co., Rochester, N. Y.*): We have an inventory control setup which is in the hands of the planning department under the treasurer. The accounting department has nothing to do with it. It functions for the most part as a staff organization. First of all, the department estimates the sales requirements. It then estimates how much of

each product they will need and plans the production all the way through back to the quantity of raw materials that is needed. However, the production department is perfectly free to digress from that plan if they see good reason for it and the purchasing department can purchase as they please, provided they see good reason for it, the ultimate responsibility landing back in the lap of the plant manager and the regular line organization to carry on at a profit.

EDWARD P. GILLANE (*Works Accountant, Underwood Elliott Fisher Co., Hartford, Conn.*): Professor Fiske, to continue on the outline or method as suggested by Mr. Robbins, we have a similar control which emanates from the engineering department. The engineering record for each individual part specifies in detail the material to be used in the manufacture of each part. Many parts may be used in the production of many different models or products.

The original part engineering record shows the number or quantity of such a part, and the different models or products requiring a certain quantity. The total number of these parts being consumed is shown on the production control copy of the engineering record. This production control record becomes the basis for issuing mass production orders for many different products or models.

We also have a copy of the engineering control chart in the accounting department, used in checking product costs, obsolescence, etc. A part may become obsolete on one or more products or models, with the result that the production of that particular part would be reduced, since the part may still be used in the manufacture of many other products or models.

The engineering department, the production department and the accounting department all have detailed information covering each part manufactured, and are in a position to know the parts used in the different products and the consumption of all individual parts being manufactured.

CHAIRMAN FISKE: Doesn't that revert more or less to what Mr. Zastrow suggested, namely, that you control your production by taking the estimated completed machines and convert it into parts, and then manufacture practically to a production budget?

MR. GILLANE: The same answer, the same method.

CHAIRMAN FISKE: Practically the same method.

OBSOLETE INVENTORY

MR. NORRIS: Mr. Fiske, I would like to ask what the experience of the people in the audience has been in regard to obsolescence. How do they maintain their inventory balances for obsolete parts? We have quite a problem.

CHAIRMAN FISKE: You are interested, I gather, in the control of slow-moving and obsolete items in inventory. Does anybody want to comment on that?

AUDRY J. DUBE (*Cost Accountant, Pepperell Mfg. Co., Lewiston, Me.*): Anything which becomes obsolete in such a manner as Mr. Norris indicated is carried on our perpetual inventory at no charge. These items are charged off to expense and we just keep a perpetual inventory of quantity on hand in case those parts become necessary again.

CHAIRMAN FISKE: Do you have any provision for periodic reports as to exactly what you have of this material?

MR. DUBE: Yes. We report on such items every month and every six months when we take a physical inventory. We bring those items up to the attention of management.

CHAIRMAN FISKE: In detail?

MR. DUBE: That is right.

CHAIRMAN FISKE: How do you do it, Mr. Norris?

MR. NORRIS: We do the same thing. I am not talking now about how to carry it in the inventory. I am talking about replacing it in the stock bins when it runs out. How do you handle reordering?

MR. MYERS: That is a question, I should say, of what kind of control you have when you make up your production plans. If you only buy the required material based on the production releases, you are not going to have any obsolescence when you finish production of your models. However, if you use the balances of stores method, you

will always have obsolescence, and that is the thing that modern production control gets away from. You do not order when you reach a minimum quantity. You order from your production releases, and only such quantities as you need plus an estimated amount of service. If you do that, you will never have any obsolescence.

MR. ZASTROW: I would like to ask what happens to the inventory he keeps for service. Does that become obsolete?

MR. MYERS: We don't keep anything for service, except, based on experience, a certain ratio of parts required based on the number of models released.

MR. ZASTROW: I don't think you get my question. You have machines out in the field on which there is breakage requiring replacement of parts. You said your service parts are based on experience. They certainly must become obsolete. I don't believe that you can say your service parts are going to come out exactly even, that you are going to use every service part.

MR. MYERS: That is true.

MR. ZASTROW: It would be extraordinary if you did.

MR. MYERS: That is true, but you can hold your service down to a very low level in inventory. Your big investment, after all, is in the production of your sales models.

CHAIRMAN FISKE: I would like to ask Mr. Robbins about that.

MR. ROBBINS: Our management policy is such that once we start a model we service it until it dies. Sometimes it is a long time dying. We have quite a bit of difficulty estimating the service requirements, and as a result obsolescence is quite a problem. As a practical matter, we keep reviewing the inventory and eliminate items as far as value is concerned as soon as we see them die, or at least write them down to a reasonable point. But as far as scrapping is concerned, we have to be very careful, and we keep something like forty years' service requirements. It is quite an unusual situation, but it is one that is very definitely a management decision and we just have to do the best we can on it.

NELSON J. BOWNE (*Works Accountant, The De Laval Separator Co., Poughkeepsie, N. Y.*): For the benefit of our friend from New Orleans, I might add that we have a surplus stock committee in our organization and hold regular meetings (except during this particular time when we have other things apparently more important than surplus stock to consider). We have monthly meetings for which prepared statements of obsolete and dying stock are made. We have the forty-year problem and we also have problems of lesser age.

I was interested in Mr. Myers' statement that if we ordered from production releases, we wouldn't have the surplus problem. Our engineers sometimes make mistakes and changes have to be made in specifications before the entire schedule is completed. That results in surplus materials and surplus parts. So, I think we have all of the problems that have been mentioned and we try to handle them by having two classifications. The first is dead stock, consisting of items the values of which have been written off although the physical items are kept for a few years to take care of service, if it comes up, and the requirements do come up periodically; some items die rather slowly and some come back to life again. The second class is surplus stock which is reduced in value. We have dead stock at "no value" and surplus stock at "reduced value."

CHAIRMAN FISKE: Do you have any general rules as to when it becomes surplus or when it becomes dead, as to the number of years' supply or anything of that kind?

MR. BOWNE: Yes; but the rules change from time to time.

CHAIRMAN FISKE: Is it done by a periodic review of your inventory?

MR. BOWNE: Yes.

MORRIS KLEIN (*Chief Cost Accountant, Veeder-Root, Inc., Hartford, Conn.*): I might say in this connection that we age our inventory every year according to date of last issue, and it has been our policy to write off all inventory that has not moved in three years. During the year we provide for the obsolescence of that inventory which will have been inactive for three years by the end of the year. This is accomplished by a periodic charge to operations and a credit to an obsolescence reserve.

DISPOSITION OF OBSOLETE STOCK

MR. ROBBINS: May I ask Mr. Klein what he does with the obsolete stock after he writes it off? We may have it at no value, but it is still there and it is physically a problem.

MR. KLEIN: If it becomes active during the year, we reinstate it and pick it up as income.

CHAIRMAN FISKE: Suppose it doesn't become active, do you throw it away or keep it?

MR. KLEIN: We keep it and maintain perpetual inventory records on it.

CHAIRMAN FISKE: Do you ever throw it away?

MR. KLEIN: We make it a point to throw it away only when we are confronted with a storage problem.

C. E. HEADLEE (*Director of Industrial Accounts, Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.*): The slow-moving stock is not worthless, even though it may not be salable on the regular market. I would like to ask any of these gentlemen who write it down, at what value they carry the slow-moving stock. A more important question is: What records do you give your management to encourage movement of that material, even though it may or may not be written down?

MR. DUBE: We try to keep management posted about the activity of these particular stocks and at the same time we encourage the turn-over of these items into money, if possible.

MR. HEADLEE: Do you give them information as to the original dollar value of that stock?

MR. DUBE: Yes, we do, and if the item has been written down we also give them the value at which the stock is carried on our inventory.

CHAIRMAN FISKE: And the time you have held it?

MR. DUBE: That is right. Sometimes we may go so far as to make suggestions as to how the items may be turned into cash or its equivalent.

CHAIRMAN FISKE: Does anybody have anything further to say in this connection?

PHILIP KREGER (*Accountant, Wagner Folding Box Corp., Buffalo, N. Y.*): I just have one question. Several of the men have referred to the practice of marking items down to zero but still carrying them in the physical inventory. I would like to raise the question as to what extent taxes, under the existing revenue laws, affects these procedures.

MR. ZASTROW: We had an experience in that field a few years ago and we are very careful in that connection. I am rather amazed some of you fellows can keep inventory on hand indefinitely without any value; ours was disallowed until we actually disposed of it. We have machines in the field, machines in stock and obsolete parts, and they were disallowed until we actually disposed of the stock. That meant we actually had to put it on the scrap pile.

MR. BOWNE: We haven't had any difficulty along that line. We do have a great many such items. However, if, as someone else has mentioned here, the activity of such items revives, we reinstate them as live stock.

MR. ZASTROW: That isn't the question. The federal auditor of the Bureau of Internal Revenue insisted that the material be physically disposed of.

MR. BOWNE: We haven't as yet experienced that difficulty.

MR. ZASTROW: My comment is not intended to question the attitude of the Internal Revenue Department, but rather to point out the fact that when we write these things down, we do effect a tax saving. Doesn't management have that in mind rather than actual costing practice?

ELSON P. DOLLIVER (*Industrial Engineer, R. Wallace & Sons, Wallingford, Conn.*): We write down a great deal of merchandise

each year. We write it down to scrap value and carry it on the inventory. We either dump it in the melting pot or actually turn it into scrap metal, depending on whether it is sterling or nickel silver.

CHAIRMAN FISKE: You have an interesting problem. How do you handle the question of balance of inventory between the different kinds of inventory? Do you carry any raw material in your company? I know a lot of the silver companies don't.

MR. DOLLIVER: We order to stock. We will set up a production authorization for a certain number of patterns and order the metal necessary to produce that quantity, allowing about six months between the stock room and the metal order, so that we have about three months' goods in process and on the shelves.

CHAIRMAN FISKE: Do you follow the practice of some of the silver companies, of having your day's requirements brought in each day?

MR. DOLLIVER: No, we have occasional requirements brought in each day; in fact, we roll most of our own sterling. I think we are the only company that does.

INVENTORY REPORTS

CHAIRMAN FISKE: One of the points on which I think it would be interesting to get some discussion is the types of inventory reports which are being prepared to meet these problems. I wonder if somebody would be willing to describe to the group the inventory reports that they use in their company. What kind of reports on inventories are being prepared, either regularly or specially? Does anybody want to contribute to that?

MR. KLEIN: We make a very simple one each four-week period, showing the balances in the various inventory accounts which are broken down according to broad classes of products as to work in process, processed parts and finished goods. We do this so that we can see the upward or downward trend in the general inventories from period to period.

CHAIRMAN FISKE: Is that in dollars, or do you show it in items?

MR. KLEIN: No, it is in dollars; it is the balance in each inventory account.

MR. HEADLEE: I might explain briefly what the Westinghouse Electric & Mfg. Co. does with their inventory sheets. On the balance sheet there is one item for inventory. In support of that we make a tabulation of inventories by operating divisions, which breaks it down to major lines of products, and on that same tabulation we segregate the total inventories of the company into approximately these classes: raw material, finished parts, work in process, and shipping or completed stocks, with perhaps a miscellaneous caption or two. Then we take divisional figures and break them down to the same segregations that I just mentioned, that is, raw material, finished parts, work in process, shipping stock, and so forth. The shipping stock, for example, is then broken down further (and up to this time I have been talking about dollars only) into dollars and units by lines or items of products.

The finished parts are broken down into sections of a factory in some instances, although not in all cases. The finished parts are also broken down to lines of apparatus generally and the raw materials to classes of raw materials, such as steel, copper, and so forth. Quantity information by items is tabulated only in connection with shipping stocks and all of these tabulations are prepared monthly with comparisons of balances and issues to show trends.

We do have a little budget information on some of those statements. I would be interested in hearing some further discussion about the basis for good inventory budgets.

CHAIRMAN FISKE: Might I ask you one question? Who gets these reports and various sections of them?

MR. HEADLEE: Top management will get the first report mentioned, in support of the balance sheet figures, breaking the inventory down into divisions and certain sub-accounts. The divisional management will get the further breakdown and then those production and sales people responsible for stock control and inventory control will get the detailed breakdowns by sections, lines of products and classes of material.

MR. DOLLIVER: We prepare what we call an exposure report, showing sales and goods on hand and on order, which is very helpful

in controlling inventories. It concentrates the sales department's attention on the slow-moving lines. It indicates to the management the lines on which they are in a short order position, and it keeps the management advised in general as to just what the status of all our stock is. That report is in detail by patterns.

CHAIRMAN FISKE: Who gets it?

MR. DOLLIVER: The sales department, sales service, production and manufacturing departments.

H. BURRELL ROBERTSHAW (*Accountant, Eastman Kodak Co., Rochester, N. Y.*): Isn't it important that these reports on inventories be relative? In other words, they should not simply show inventories as of a certain date, but should show inventories of so many weeks' supply, what the sales have been, what the sales requirements are going to be, and so on?

CHAIRMAN FISKE: As I understand it, that is what Mr. Dolliver's figures show. They indicate what is on hand, and they show the sales. You get down, don't you, to the number of weeks' supply you have?

MR. DOLLIVER: In addition to that, we have a sales forecast; from that, it is quite easy to tell how much we have on hand in relation to the forecasted sales.

GEORGE C. LYON (*Cost Supervisor, Limerick Yarn Mills, Limerick, Maine*): In addition to the usual inventory reports which we issue monthly, showing a comparison with prior months, we also furnish the management with a market position report, which is very similar to what we have been talking about. We base this on the physical inventory. Then, during the month, between inventories, we estimate our position by adding the new sales and deducting new purchases. Thus, management is provided every week with a fairly close figure as to its market position in wool, mohair and the other types of raw material we use.

CHAIRMAN FISKE: That is in the case of raw material. What do you do about finished goods? Do you do it there also?

MR. LYON: We have a finished goods position, just the same as we have a raw material position.

CHAIRMAN FISKE: Is that in total or in detail?

MR. LYON: Detail, because of the type of goods we manufacture.

CHAIRMAN FISKE: You do this for each individual item in your line?

MR. LYON: Most of our goods are manufactured specifically to order. We don't make very much up to stock; but on the stock items we do carry a weekly position all the time. We know exactly how much we can go ahead on and how much we are short or long on a particular type of yarn.

MR. ZASTROW: It may be interesting to know that we keep in our sales department a sort of inventory control of finished machines three months ahead. It is really a daily control of inventory from the finished machine angle. Our sales department must know every day just what we have on hand. Otherwise, we might find ourselves in the position of having sold something when we get another order, and then we can't deliver. We furnish a chart to the sales department. This chart is made up weekly, I believe, and it indicates what we expect to produce within the next three months and when we can deliver. Our sales department and our branch offices—we have eleven branch offices throughout the country—are furnished this information. The branch manager, as soon as he gets an order, must telephone or wire it in. Then one is subtracted from that particular lot number, as we call it. We manufacture by lot numbers. A lot may consist of a unit of one, four, eight, sixteen, thirty-two or sixty-four; in other words, multiples of four.

A. D. ROSS FRASER (*Secretary, Rome Cable Corp., Rome, N. Y.*): I have been very much interested in the discussion, because our particular problem seems to fit in with quite a number of the problems that have been brought up. In the first place, we operate on a budget basis. We project our inventory position and our balance sheet approximately three months ahead. That is done in conjunction with the sales department. We also work with the production department in laying out certain stock bases.

As for reports, we have a daily report on our inventory of copper because we can figure the copper content of our outgo, that being the largest component raw material and a big percentage of our products. It is very easy to use the incoming copper and provide a daily over-all control.

At the end of each month, we receive from the cost department a breakdown of our inventory by basic raw materials, of which there are about ten, such as copper, lead, cotton, waxes, and so on. We also break down our cost of sales into these same elements and these can readily be compared with the actual inventory, which gives a quick picture of activity on each of our main elements. This is supplemented by information from the purchasing department giving an actual breakdown of the raw materials on hand.

THE INVENTORY BUDGET

CHAIRMAN FISKE: Any other questions or comments here? The matter of budgets has come up two or three times. It seems to me it would be appropriate to spend a little time on that.

Who is doing inventory budgeting? Let's have some experience on that. Are you doing anything in Westinghouse?

MR. HEADLEE: We are attempting to do something.

CHAIRMAN FISKE: Tell us about it.

MR. HEADLEE: On shipping stock inventory statements we show some information as to sales, and some information as to turnover. We have attempted to develop one figure which we might term the inventory budget, with the thought of showing it on those statements to give management a dependable guide as to whether or not the inventory balance was correct in the light of current production, current sales, current deliveries out of stocks, and the future outlook; but to date we have not been very successful in getting what we consider acceptable results, although we have had some success in spots.

CHAIRMAN FISKE: I should think the problem of getting that kind of an index would be a very difficult one.

MR. HEADLEE: It is.

CHAIRMAN FISKE: Are there any suggestions as to how it can be done?

SIDNEY KNIGHT (*McKinsey & Co., New York, N. Y.*): Is the difficulty in the Westinghouse problem one of getting a composite index or of the actual building up of the sales data in addition?

MR. HEADLEE: Largely the former, but also the latter if the reference is to sales volume fluctuations.

CHAIRMAN FISKE: It seems to me that the difficulty would be, at least in part, that the total could be the same month after month—that it wouldn't be significant because the content of your sales and of your inventory would have both changed, with the result you would have no basis of comparison.

MR. KNIGHT: What is the basic difficulty?

MR. HEADLEE: I would say the difficulty varies with the product, but basically results from sales and production fluctuations of an unpredictable or uncontrollable nature. I was really interested in any experience that any of the men might have on the subject.

CHAIRMAN FISKE: Does anyone want to make any suggestions here?

MR. NORRIS: I imagine that if you could induce the engineering department not to go too far into the future, you might be able to budget a little better than you can today.

HOMER W. STANHOPE (*Cost Accountant, Anheuser-Busch, Inc., St. Louis, Mo.*): We calculate an over-all budget of our material requirements for the year which is made for the purpose of determining the cash outlay required to buy the materials. This budget is prepared from figures furnished by the sales department of expected sales in each of the various divisions of the business. We work the reports back to production and from the anticipated production we calculate our material requirements, which are priced to give the budgeted total.

It is hard to build up the budget covering the monthly require-

ments (and I doubt if the results would justify the efforts), so we build up the annual requirements and calculate the dollar value.

Since we don't build up a monthly budget we can't very well compare the actual expenditures for materials with the budgeted amount during the year; therefore all we do is to accumulate the actual expenditures for materials monthly which is reported in comparison with the budget.

We do go a little further in some of our divisions where we determine our material requirements from our preliminary sales budget and go out and buy them.

CHAIRMAN FISKE: Is this budgeting in dollars or in units, or both?

MR. STANHOPE: We budget the quantities required on all major items of materials and then calculate the dollar values; on items of supplies we estimate the dollar value only.

CHAIRMAN FISKE: But you keep it in dollars thereafter; you don't attempt your control in units?

MR. STANHOPE: You are right except that on certain materials the quantities budgeted are used in purchasing, and on these we use both the quantity and value.

ROBERT W. PEDEN (*Supervisor of Standards, Bundy Tubing Co., Detroit, Mich.*): I should like to ask Mr. Fraser if his firm ever practiced hedging to protect itself against inventory losses, or if anybody else here has done that; and, if so, how they handle it in their accounting.

MR. FRASER: We have practiced hedging but only to a very limited extent. We must have a certain amount of working stock to operate. Our costing is on a last-in, first-out basis, so that our inventory fluctuation in the past five years has been approximately one cent a pound. Copper during that period has varied from 9 to 17 cents a pound.

CHAIRMAN FISKE: Are there any other problems anybody wants to bring up?

MR. BOWNE: The new problem that is bothering us relates to priorities—I would like to know what is being done in other organizations about the details required by OPM in connection with priorities, and what department is handling it.

CHAIRMAN FISKE: Some experience on that? Who is handling the details of priorities?

EUGENE R. NEVINS (*Office Manager, Manning, Maxwell & Moore, Inc., Bridgeport, Conn.*): It rather surprises me that it has taken us this length of time to get around to this problem. Perhaps it is because some accounting departments have been lucky in not having to deal with priorities. In our company priority problems are handled in the material control section, which is the section controlling the acquisition of inventory. They determine from the customers' orders just what is to be ordered. They also determine from past experience on particular parts which parts are likely to be called for.

I presume Mr. Bowne had in mind tying up the preference certificates received from customers to the preference certificates issued to suppliers. This group again takes care of that. As these certificates are received in our organization, they are cross-indexed to the shop papers and the shop papers, in passing through the material control section, immediately indicate that there is a preference rating certificate on a particular order. That preference rating certificate is used to obtain the material for that order.

Of course, on non-governmental contracts on which there are no preference rating certificates, we have to trust to luck. For the most part, our experience has been very satisfactory. It has been amazing to me to read in the papers of the shortage of materials, and yet each month we can see our inventory rising 10 or 15 per cent, and that rise has kept up during the last year.

CHAIRMAN FISKE: Any other experience in this connection?

WALDAMOR G. ECKMAN (*Assistant Controller, American Manganese Steel Div., American Brake Shoe & Foundry Co., Chicago Heights, Ill.*): We have a different setup. We have this report compiled from customers' orders, showing the requirements of the various metals, classified according to priority ratings. Then we file

a return with the OPM and they tell us how much material we can get.

GRAIN INVENTORIES

MR. STANHOPE: Mr. Chairman, I would like to ask if any of the members have the problem of inventorying grain. There seems to be quite a problem where you have grain stored in an elevator 80 feet high and 20 feet in diameter. In our case, we have ten or fifteen different types of grains and it is difficult to obtain the weights on the contents of the elevators.

CHAIRMAN FISKE: Can anybody contribute anything there, the problem of inventorying grain in bulk in large storage bins?

JOHN M. GREENER (*Plant Accountant, Baker Castor Oil Co., Jersey City, N. J.*): We have outside storage tanks where we store castor seeds. Each week, for insurance purposes, these outside tanks are measured off to scale on the inside. We take the height to which they are filled and we have a table which gives us the weight in those storage tanks in pounds.

MR. STANHOPE: Apparently our problem can't be solved in the same manner as that of Mr. Greener. With grain stored in bulk as we store it, our problem is caused by settling or packing. The bin may be filled one day and at a later date it will be an entirely different depth, so that volume doesn't help us.

CHAIRMAN FISKE: Any other problems anybody wants to bring up? We are getting past the scheduled closing hour, but we will keep going as long as there is anything anybody wants to talk about. Gentlemen, if there aren't any further questions, we will declare the session adjourned.

. . . The meeting adjourned at five-five o'clock . . .

JUSTIFYING INVESTMENTS IN PLANT ASSETS

Chairman: ROBERT P. BRECHT

Associate Professor of Industry, Wharton School,
University of Pennsylvania,
Philadelphia, Pa.

CHAIRMAN BRECHT: I think it is the prerogative of the discussion leader to more or less define the area for discussion. The subject, "Justifying Investments in Plant Assets," might conceivably lead to very broad treatment. The word "justifying" has wide implications, and "plant assets" can be treated in a wide sense rather than a narrow one. However, I would prefer to limit the discussion to that form of plant assets represented by equipment and machinery. Essentially the same considerations would be involved in investment in buildings, but since that is made relatively infrequently, I would prefer to deal with machinery and equipment.

I do so for a number of reasons. With capacity operation in many plants at the present time, the opportunity to modernize equipment is very real and essential. That makes it an issue that is of current consideration. I think, too, that the replacement of machinery and equipment is of much more frequent recurrence than the replacement or expansion of building.

Finally, since it is a live and frequently recurring problem at the present time, I believe that some definite technique, some fundamentally sound considerations, should guide those interested in making replacements and selecting new equipment.

I would like to limit the inquiry here also to the substitution and replacement of equipment and to exclude plant expansion, particularly when such investment represents entirely new types of equipment required because of diversification of product.

We can, of course, invest in plant for reasons of expansion, for the improvement of the plant environment and working conditions, or for replacement purposes. It is the last two that I think we should confine our attention to.

I think, too, our concern here ought to be with the technique of justifying investment rather than with company procedure for the approval of investment. I have in mind by procedure the fact that the suggestion for an improvement or replacement may originate with the foreman, is then carried to a plant accounting department, let us

say, for investigation and approval, and is moved finally to a divisional superintendent or some higher authority for final approval. That is an important part of the justification routine, but our interest, I think, should be primarily in the basic problem of justifying investment.

Finally, I would like to limit our analysis of justification to economic justification. I think I can make this point a little clearer if I run over briefly why managements invest in machinery and equipment. A whole host of reasons can be advanced. One is to improve quality of product. In such circumstances, the management may take this position: "We don't care if costs are not lowered; all we insist upon is that the proposed equipment should not increase the cost of performing the operation."

We may invest in equipment to improve working conditions, and, as a matter of fact, may actually accept a slight increase in the cost of operating the plant. That would occur if, for instance, we were going to introduce an air conditioning system. If you asked the management of a company, "Why did you install this air conditioning system?" they would respond almost invariably in terms of intangibles—"We believe that it will be good for the morale of the worker. We believe that over a period of time they will be more responsive, there will be less absenteeism." They don't anchor that decision to a cost-saving analysis, however.

You may invest in equipment to improve customer service. That, too, may be done at something of an increase in cost if you believe that that increased cost will justify the investment in terms of holding customers.

We may invest in equipment to realize substantial economies and savings, and that is the particular field of interest I would like to explore today.

Each of these other reasons for investing in machines and equipment suggests ways of justifying the investment. If we are interested in improving the working conditions, justification will find itself in such intangible factors as employee morale. As already stated, if we are going to justify the investment in equipment for improved service to customers, that justification will be made in terms of what we believe to be the response of customers and whether they will be held in line.

We can see, then, that this question of justification might conceivably take many forms and require many different types of anal-

ysis. So, for purposes of discussion, I would like to limit it to economic justification; in other words, justifying the investment in plant assets, particularly with reference to machinery and equipment when there is a saving in view.

DISCUSSION OUTLINE

JUSTIFYING INVESTMENTS IN PLANT ASSETS

1. In what terms shall economic justification be measured?
Profits or savings?
2. What tests can be established to measure relative economic worth?
Repayment of invested capital?
Return on invested capital?
Absolute savings?
3. What cost estimates should be included in making an economy study?
Interest on capital invested?
Taxes?
Insurance?
Depreciation and obsolescence?
Direct labor costs?
Indirect labor costs?
Cost of space occupied?
Material costs?
Maintenance or upkeep?
Overhead costs?
4. On what basis shall capital charges be computed?
For old equipment:
On original cost?
On book value?
On disposal value?
Shall disposal value be deducted?
For new equipment:
On installed cost?
On installed cost plus sunk cost?
Shall disposal value of old equipment be deducted?
5. Should savings be computed on a unit basis or total annual cost basis?
6. Should the economy study include normal cost estimates or cost estimates that include the economic tests to be met? (See attached examples 1 and 2 for difference in methods.)
7. How should the results of the economy be considered?
As a definite and final answer?
As a guide to managerial judgment?
8. Who should determine the economic justification of investments in plant assets?
The foreman?
A higher line executive?
The controller?
The accounting department?
The plant methods department?

Now, one further consideration for purpose of orientation. Let us realize that the economic justification should really be, at least in my opinion, the last step in the selection of equipment. We are presupposing that in the analysis of methods, it has been decided that the new equipment functionally does its job. Analysis shows that it fits the physical environment, thus avoiding the experience of a company that was just about to purchase an electric truck and a string of trailers only to find at the last minute that under full load the truck couldn't make the grade of the inclined ramps that led from one building to the other. That particular type of equipment did not fit the environment. Again I am presupposing preliminary analyses to determine whether labor of more or less skill is required. I am presupposing too that the preliminary analysis will have determined that the quality of the product is at least protected if not improved.

When these preliminary points have been established, we are in a position to determine whether investment in this piece of equipment or in any one of a series of proposed pieces of equipment is justifiable.

I would like to limit the discussion in the fashion I have outlined here, not to be arbitrary but because I believe we can go further in our discussion if we organize it intensively rather than if we roam haphazardly over a larger area.

This is your meeting. I have prepared here some suggested questions for discussion that might conceivably lead to an interesting interchange of points of view. Please understand, I have a point of view on many of these questions but I am going to withhold that until such time as it seems proper for me to enter the picture. I am really a puller of the strings, as it were, and this is your meeting.

Keeping in mind that we are talking about economic justification, "In what terms shall economic justification be measured? Profits or savings?" By savings I mean lower costs of performing the operation with one piece of equipment as against another. As you realize, those savings may or may not be profits. Should we attempt to defend or justify our investment in plant assets of machinery and equipment in terms of their effect on final profits of the business, or should we adhere to an analysis of savings?

PROFITS OR SAVINGS AS MEASURE OF ECONOMIC JUSTIFICATION

ROBERT L. PAGE (*Treasurer, Robertson Paper Box Co., Inc., Montville, Conn.*): It seems to me the savings would be the im-

portant figure. If you can make savings and still sell at the same price, you are bound to make a profit.

CHAIRMAN BRECHT: Is there any contrary point of view?

ORVILLE SHARNBORG (*Controller, The Vendo Co., Kansas City, Mo.*): I have in mind a specific case involving the moving of a plant. In that case the analysis was entirely in terms of profits rather than savings.

CHAIRMAN BRECHT: Can you give us a brief statement of how you arrive at the profits involved?

MR. SHARNBORG: Volume of production was the main point.

CHAIRMAN BRECHT: Are there any other points of view?

HARRY C. MCCLUSKEY (*Treasurer, Kellogg Switchboard & Supply Co., Chicago, Ill.*): There might be another element which may be neither profits nor savings. It is the element of service. It may cost more than it does at the present time, and we may have neither profits nor savings, but we render a better service to our customers.

CHAIRMAN BRECHT: Of course, you are justifying that now in terms of one of the intangibles mentioned—better service. Any other points of view?

FRANKLIN R. EHMANN (*Controller, The Hellwig Silk Dyeing Co., Philadelphia, Pa.*): There may still be another reason for plant additions. You may have to make investments in machinery in order to keep up with the march of time, even though you can't make any more profits or realize any savings.

CHAIRMAN BRECHT: Elaborate on that a little more for us. Are you thinking now of the defense program particularly, or patriotic pressure, or what?

MR. EHMANN: I think it is true, whether for the defense program or otherwise, that you must keep your plant up to your competitors'

or your costs will be too high. In order to keep in a competitive position, you must make capital additions to offset obsolescence.

CHAIRMAN BRECHT: That is a perfectly good point, but doesn't that come back to economic justification? When would you make these replacements? Under any and all circumstances, merely because they represent some new machine? Isn't it true that if you are going to hold your own competitively, you must think in terms of savings or profits? You don't really sidestep this particular point, do you, even under the situation that you mentioned?

MR. EHMANN: No, you don't sidestep it because any justification that I can think of would come back to either savings or profits, which to my mind are the same.

CHAIRMAN BRECHT: I was trying to determine which you think has the greater value and use for our purposes, that is all.

WILLIAM C. WICHMAN (*Assistant Works Accountant, General Electric Co., Fort Wayne, Ind.*): Since you have limited this discussion to economic justification, which rules out expansion and such things as might give you a higher selling price for your product, I don't see why savings are not the only effect on profit under the conditions that you stipulate.

CHAIRMAN BRECHT: I myself agree with that point of view. The use of profits, it seems to me, is limited to cases involving a whole product. That is the only point I wanted to bring out. In other words, you can't weigh the desirability of introducing new machines in a part of your process in terms of profits. It is the entire product that really makes the profit. If you are going to expand into a new field, then perhaps you necessarily must think in terms of profits.

Then when you come to your final problem of replacing equipment, even under an expansion program, it seems to me the more valid device or measure is savings, one machine as against another, the new or proposed process against the old. Are there any other points?

TESTS TO MEASURE RELATIVE ECONOMIC WORTH

CHAIRMAN BRECHT: Let's turn next to question 2: "What tests can be established to measure relative economic worth?" I have

suggested a few here. Which of these do you think are best, or do you think that none of them really fills the bill? "Repayment of invested capital? Return on invested capital? Absolute savings?" How shall we guide or justify the investment in a new machine? In a replacement?

FRANCIS E. SWISHER (*Chief Accountant, Dennison Mfg. Co., Framingham, Mass.*): Granted that you always have a choice of where you will put your money, it seems to me that the only final test that you have is absolute savings. If you want a 6 per cent return on investment, you have another problem. Equipment A may return 6 per cent plus, and equipment B may return 6 per cent plus something else. If you have absolute savings, you can divide the investment by your savings and figure the number of years in which you will get your return. That gives you, I think, a real comparison when you have a choice of where to put your money.

CHAIRMAN BRECHT: In other words, absolute savings, as such won't tell you; we will agree on that.

I have distributed a few examples of economy studies,* which can be used for specific reference. Under Method 1 there is a saving of \$1,511.15 in the introduction of a proposed sand cutter in a foundry, compared with the present hand method. Now that \$1,511.15, as dollars, doesn't tell us a great deal, does it? Is that a good investment to make or not? Would you put your money into that sand cutter or not? It seems to me we must have some way of crystallizing the importance of those savings, and that, you have suggested, is the repayment period.

MR. SWISHER: That is right.

CHAIRMAN BRECHT: In other words, using that test, the \$1,511.15 divided into the \$2,140 will give a repayment period of 1.4 years.

MR. SWISHER: May I also add that an additional study should have been made to establish the life of the product to be manufactured on the proposed equipment and to assure that the product is a good risk in which to invest the money.

* See page 210.

MR. WICHMAN: I would like to suggest, also, that one of the costs would be the federal excess profits tax. Isn't that one of the most important things that we are up against at this particular time?

MR. SWISHER: Will you elaborate on that?

MR. WICHMAN: Most companies today are paying very heavy excess profits taxes. If we make our decision without taking into consideration the excess profits tax, we may find that out of the \$1,500 we have considered profit for the period, we may have to pay back \$1,200 to the Government in taxes. We may wind up with an asset on our books that may be a good asset, but if we have turned all our cash into machines, we can't run our business.

I don't know just how this should be handled. It is one of the things in which I am most interested. It must be considered as a freak condition perhaps, but it is very vital today.

MR. SWISHER: Under such a program, I don't believe that money would ever be invested in new equipment, particularly in those companies which are in the 50 per cent excess profits tax bracket or over.

CHAIRMAN BRECHT: Aren't you disturbing your whole thinking by including something that is anticipating the final result? These are estimated savings, the difference between two sets of cost estimates. You are assuming that these cost savings are going to be translated into profits. Aren't you unnecessarily complicating your whole reasoning process by making that assumption?

MR. WICHMAN: It is true that we have never considered income tax as being part of the cost, and I am not speaking from a theoretical standpoint. However, as a practical matter, I am actually going to pay out \$1,200 of the \$1,500, am I not?

CHAIRMAN BRECHT: If that \$1,500 is finally translated into profits.

MR. WICHMAN: That is right.

CHAIRMAN BRECHT: Actually, it might increase your profits considerably more. Armed with this saving in the shop and with sharper

bidding, you might be able, through better management, to take that \$1,500 and make it \$2,400.

MR. WICHMAN: You have ruled out everything but the replacement of a machine.

CHAIRMAN BRECHT: I am merely saying that the estimated savings brought about with this better piece of equipment, if used by management as a tactical basis in meeting competition, may actually grow to a considerably larger profit, in which case you can't say this impinges on the profit account to the amount of \$1,500.

HERBERT E. TUCKER (*Partner, Charles F. Rittenhouse & Co., Boston, Mass.*): I think the last speaker has hit the nail on the head. He has illustrated the viciousness of excess profits taxation and the load it places on industry. Every single manufacturer who buys new equipment today takes that tax factor into consideration. I think a great many people are held back from making additions and improvements to plants on that account.

GEORGE W. CONTANT (*Certified Public Accountant, Buffalo, N. Y.*): I hesitate to comment on this because I didn't hear the first part of the discussion, but I want to point out that the provision in the Revenue Act for amortizing the cost of additional facilities over a five-year period or a shorter period would answer that objection, because you have recovered your cost in the way of depreciation and to that extent you haven't been taxed.

MR. WICHMAN: There are two qualifications to that. One is that the facilities might not be for defense, and the other is that the Government is very reluctant to allow amortization without stringent restrictions.

EMIL J. MONDE (*Partner, Seward & Monde, New Haven, Conn.*): The prime phase of the question, as I see it, is that we must find justification for investment in plant assets. If a particular investment is calculated to produce a profit which brings about a return of capital, either through the medium of normal depreciation or amortization, on the basis of defense contract requirements over a period of 60 months, and in addition produces a taxable profit, then such profit

contributes toward the payment of the tax and leaves some profit remaining which should justify the investment. Therefore, the fact that such profit is taxed should have no bearing upon our judgment, for the investment should be made if a profit can be realized.

MR. WICHMAN: That is true, but the period required to return the investment would be increased from 1.4 years to 5 years.

MR. SHARNBORG: I have only this comment to make—I know a company which had this question come up. They weighed well the fact that there would be a saving on the replacement and that they did pay excess profits tax. Their decision was that it was smart business to go ahead and replace the asset because they would have its cost returned at a much faster rate than ordinarily would be the case.

SIDNEY R. CATSIFF (*Supervisor of Cost, General Electric Co., Fort Wayne, Ind.*): I think we are missing one point. Just because management might decide to do one thing or another after getting the facts doesn't eliminate the question of whether we should, in preparing an analysis for our management, present such information as Mr. Wichman suggests be added to the analyses.

Up to a few months ago I paid little attention to the effect of excess profits on the question of whether or not we should invest in equipment. I followed either one or the other of the two methods you gave. I never used absolute savings, but I used number of years or return on investment. Depending upon how you set your standards, they come out to about the same answer, in my opinion. But I do think that today we must consider not only questions like this, but possibly questions such as you tried to bring in and which were ruled out. Many times you have something very involved. I think we need certain broad measuring sticks for each business and a certain factor must be added for the effect on taxes of substantial changes in equipment.

CHAIRMAN BRECHT: My reaction to this proposal is simply that it is a mistake to inject it into an economy study, your cost computation, although I believe it is a point that ultimately should be taken into consideration. If these cost analyses are worked out properly to provide a sound basis for managerial decision, they should have

the fewest possible confusing elements injected into them. This consideration should be put down as perhaps one of half a dozen intangibles, judgment factors, that would be examined finally in order to reach a decision, rather than attempt to inject it quantitatively into the analysis.

I wanted to bring out the distinction between the first two tests. Sometimes the repayment period is used as a protection against machine obsolescence; in other words, where it is felt that there is a substantial change in equipment, the test used is repayment of invested capital, the repayment period being what seemingly is a safe period during which radical or important changes of equipment are not likely to occur.

Put it this way. If it is believed that anticipated obsolescence is three years, i.e., that on an average once every three years a new, substantially improved machine is brought out, then three years would be established as a standard. If the savings on the proposed equipment, when applied to the investment, would pay for it in three years or less, it would be a good buy, as far as the figures go. If it took longer than three years, you would look askance upon it, perhaps even pass it by as an unsatisfactory purchase.

If obsolescence isn't an important factor, then the test may well be return on the invested capital. They come out about the same. We are simply expressing the same thing in a different way, but in the one test protection against obsolescence is emphasized and in the other investment opportunity.

Are there any other comments on those points?

WALTER E. DAVERIN (*Controller, Rising Paper Co., Housatonic, Mass.*): I suppose you consider these as intangibles, but in any investment of new capital in our business, we take into consideration three other points: (1) the safety factor, which is reflected in direct cost reduction in insurance rate, (2) our personnel relationship, and (3) the labor union standpoint. I suppose those are the intangibles that you have talked about, but to me they are very important.

CHAIRMAN BRECHT: The first one might be translated into figures, might it not?

MR. DAVERIN: That is right.

CHAIRMAN BRECHT: But the other two are pretty much intangibles that you can't express in quantitative cost terms.

MR. DAVERIN: There is one other question I would like to bring up here. What would you do regarding a suggestion made by an employee with reference to safety or increased production?

CHAIRMAN BRECHT: Do you mean, how would you handle such a suggestion?

MR. DAVERIN: Would you give it consideration even though there were no profits or savings?

CHAIRMAN BRECHT: The employee has made a suggestion. It has merit, but there are no savings. Would you introduce it? Of course if you have a suggestion system, procedure is established for passing upon proposals. The value of a suggestion must be determined. You are committed to a program of accepting employees' suggestions. One of the important points is how you are going to reward employees for their suggestions. How are you going to determine quantitatively how much the employee should receive? Does anybody want to offer the experience of his own company? How do you determine what bonuses you pay to employees for suggestions as to new equipment, new methods, and so on?

MR. SHARNBORG: Any suggestion is passed on by a board of engineering, production and management. If it has merit we look into the cost figures. The decision is made on the basis of these figures.

WILLIAM C. ARMSTRONG (*Secretary & Treasurer, Rockbestos Products Corp., New Haven, Conn.*): I have been thinking about what Mr. Wichman said here about taxes. Let us assume that we have machinery that is fully depreciated, and with today's taxes at, say, 60 per cent, if instead of continuing along with old machinery we replace it with new machinery, then we can charge depreciation that we couldn't charge on the fully-depreciated asset. If the taxes are 60 per cent, aren't we getting back 60 per cent of our cost in a tax saving, and isn't that the logical thing to do then—to replace our old machinery at a time when we are having high taxes and can have it absorbed in taxes?

MR. SHARNBORG: I think there is a point that hasn't been brought out. If you can obtain new machinery within the next year, you know that it will have greater value later, and you can reflect that in your balance sheet through an appraisal.

WILLIAM A. MACKIE (*Mathieson, Aitken & Co., Philadelphia, Pa.*): Is it necessarily true that machinery will appreciate next year where we are running that machinery on double or triple shifts?

MR. SHARNBORG: My remark had reference to liquidation values. If you invest money now, what will you be able to realize later?

MR. CATSIFF: I should like, first, to disagree with Mr. Sharnborg. I think it is a mistake in any business to talk about buying material or equipment ahead of time, to confuse the question we are discussing today with the question of hedging the market or trying to make money by speculating on market changes. If you want to do that, I would suggest that you keep it out of your operating profit and loss. A lot of businesses do get by through speculating and that is how they make their money. But for the purpose of this discussion, I would certainly say we should eliminate any consideration of speculative profits.

COSTS TO BE INCLUDED IN ECONOMY STUDY

CHAIRMAN BRECHT: We are interested in developing the technique here for determining relative costs. I have called such a cost comparison an economy study. What cost estimates should be included in this comparison? Should capital invested, taxes, insurance, depreciation and obsolescence, direct labor costs, indirect labor costs, cost of space occupied, material costs, maintenance or upkeep, and overhead costs be included? Are any omitted that should be included? In the formulae of quite a few companies, the decision as to whether to buy a piece of equipment rests entirely on savings in labor costs. Do you believe that is defensible?

MR. CATSIFF: I think the answer is that you should investigate all these factors and more, the degree depending on the importance of each. In the average case you probably have two or three at the most, selecting those which appear to have the most importance. Then, as you suggest, you put the rest down as other intangible sav-

ings or as possible disadvantages of the particular project, without going to all the work of trying to individually figure out such items as taxes and insurance, because it gets quite involved if you attempt to calculate what any individual piece of equipment would do to an insurance schedule, for instance.

CHAIRMAN BRECHT: In other words, at best the particular costs included must be approximations or estimates. Is there any other point of view?

ARTHUR T. CAMERON (*Partner, Edward P. Moxey & Co., Philadelphia, Pa.*): I am wondering whether this is really a cost meeting or not. Nobody has started an argument about interest on capital invested. It doesn't sound right to me. Are we all going to let it go by and admit that interest should be included? I would like to have a show of hands as to how many people actually do it.

MR. WICHMAN: This doesn't mean you have to write it into your costs.

MR. CAMERON: Let's see how many include interest. (13)

MR. ARMSTRONG: I would like to ask if those who raised their hands actually pay the interest or whether they just compute it?

MR. CAMERON: I knew there was going to be trouble. It isn't a question of whether they made book entries. I want to know what they actually think.

EDW. WM. KRUEGER (*Partner, Walton, Joplin, Langer & Co., Chicago, Ill.*): I think one point in connection with capital expenditure that probably has been overlooked is viewing the expenditure from the standpoint of a period of years. I have seen examples in mining operations involving heavy machinery where, because of the variation in demand over a period of years and lower labor costs during periods of recession, they found it better to pay the higher rate for labor while there was a big demand in order to take advantage of the lower cost when the demand fell off.

CHAIRMAN BRECHT: I think I can state the engineer's point of view as opposed to the accountant's. The engineer would say that

in making an economy study you don't want to follow the accounting practices developed and instituted by your accounting department. Your methods have been developed for use in accounting for things done, work completed, the cost of operation. This is a special kind of study. It is somewhat like a differential cost study. Therefore, don't be governed by whether you ordinarily use interest on capital invested as an item of expense. The important thing here is that you have different pieces of equipment, each one representing a different investment. You must give full weight to that difference in investment in order to make a comparison that does recognize all factors. Consequently, the group that makes its decisions rest entirely on direct labor cost comparisons is fooling itself.

Now, how can you bring into purview all these different elements except by making as complete as possible an analysis of the fixed costs. Therefore, interest on capital invested for purposes of comparison should be included.

What we are trying to get in the economy study, presumably, is as unbiased and careful a statement of two or more sets of comparative costs as we can get, with as few distortions as possible, the theory being that management can make better decisions when it anchors to factual analyses that are reasonably accurate. Therefore, such points as anticipating the excess profits tax ought to be excluded from the cost study as representing a needless complication.

There was another point mentioned a while ago about appreciation. If you inject that, you get another complicating feature in the computation.

MR. CATSIFF: Isn't your real objection to including this question of excess profit taxes somewhat of a doubt in your mind as to how accurately profits really could be calculated, rather than any objection to the principle itself?

CHAIRMAN BRECHT: I would agree with that. I don't believe you can be certain as to what they will be. Therefore a confusing element enters if you attempt any estimate.

MR. SWISHER: I subscribe to the out-of-pocket cash viewpoint. It seems to me that in making your study of whether or not you will invest this money, there is no need to consider depreciation on the present equipment. That money has already been spent; it is out of

pocket. If you should drop a line of products, you would write off the equipment and you would not consider it a part of the cost of making another product. I see no difference at all in considering it on new equipment. I would add to direct labor saving, direct materials, and any so-called expense supplies that can be allocated to the new process as against the old.

CHAIRMAN BRECHT: You would go along at least with this thought, wouldn't you, that savings should be real and not fictitious or arising from accounting conveniences? I raise the point because I know one company which charges its overhead rate at 100 per cent of direct labor. In making an economy study, it figures, for instance, that it will save \$400 of direct labor. Therefore this company says, "We save \$400 in overhead also." You wouldn't concede that point, would you? Well, that has been done. Savings must be real. The same is true with respect to cost of space. If you are simply going to release space, there isn't much use in claiming any savings if it will just lie idle.

MR. SWISHER: I would make a distinction between a study dealing with a single piece of equipment and one dealing with a whole department or a large study involving the replacing of a great number of pieces of equipment.

CHAIRMAN BRECHT: On the question of savings in space, I would like to cite an experience of some years back. A proposal to introduce a high-speed grinding wheel in a shop would have stepped up production tremendously and therefore reduced the number of grinding frames required. This, in turn, would have released a great deal of floor space. Claimed savings were very substantial. When analyzed, however, the great bulk of savings was in floor space, whereas, as a matter of fact, had the proposal been adopted, that space would have remained idle. The rental factor would have gone on just the same. The company would have continued to depreciate the building, pay for insurance and taxes on it, and so forth, and there would have been no real saving at all. That is too short a short-cut. Savings must be real. I would agree with much that you have said, although I can't see eye to eye with you on ignoring capital charges. Are there any other reactions?

MR. SWISHER: I don't want to hog this meeting, but you know the old saw about the company that had a beautiful office building. They weren't making any profit because they had depreciation and all this expense on the office building in their costs. So they put up just a frame building, moved over into that building, wrote off the old building, and left the depreciation on it out of their costs. Then they began to make money, so they thought.

WILLIAM BLACKIE (*Controller, Caterpillar Tractor Co., Peoria, Ill.*): In these meetings of accountants, I think one thing is sometimes forgotten—that it is the job of business management to spend money, to earn by spending.

As I understand this problem, we are considering alternatives—the use of one machine rather than another, or the substitution of machine-power for man-power. Under either alternative we are going to have income taxes which, relatively, are going to be about similar in effect. If savings would be deferred by taxes under a new method, they will also be, or are being, deferred under the old method. I suggest that such taxes are not a factor in the problem under consideration.

And now, if you don't mind, Dr. Brecht, I would like to encroach a little bit on the subject I am assigned to cover tomorrow.

CHAIRMAN BRECHT: We are glad to help.

MR. BLACKIE: On the matter of depreciation, all of the given studies of justification for capital investment presuppose a time basis for depreciation. There is, however, a theory of productive activity as a basis for depreciation in which the time factor, as such, is excluded from consideration. Where such a productive activity basis assumes, let us say, that a machine will produce so many thousand or so many million units, over an unknown period of life, what method or methods are favored in giving recognition to depreciation in a study of this type?

CHAIRMAN BRECHT: I think I have an answer, but let's see what we get from the floor. Are there any reactions on that point?

GEORGE E. MOSELEY (*Assistant Treasurer, The Watertown Mfg. Co., Watertown, Conn.*): You must take the item of depreciation

into consideration because the Bureau of Internal Revenue won't let you get away with saying, "I only used the machine one hour this year; next year I will take ten hours." They want you to take the same amount of depreciation each year, whether the machine is idle or not.

CHAIRMAN BRECHT: That is a good answer, of course, from the standpoint of accounting practice, but we must be free from those limitations if we accept the idea developed a while ago that this is a special study. We are therefore free to do many things.

MR. MOSELEY: We can't do it on the books.

CHAIRMAN BRECHT: Are there any other points on this question? If we were limited by actual accounting practice, if this were, in effect, accounting, then I think your point would be well made, but I do believe that we ought to concede the point that we do not necessarily have to abide by our accounting practice. We develop the best practice or technique for this kind of a study.

MR. WICHMAN: I would like to suggest to Mr. Blackie that there are two elements in depreciation. One is obsolescence, which is a function of time; the other is the use factor, which is a function of pieces produced. There is no reason why you can't break your study down, if you want to, and have your engineer tell us how many pieces this thing is going to produce, computing the depreciation due to use on that basis. He doesn't know that any more than you know how long it is going to operate. I don't think the accuracy of the study justifies making separate assumptions, but there isn't any reason why you shouldn't. After all, you are piling estimates on estimates.

MR. BLACKIE: A productive activity method of depreciation would, of course, be used only where the use factor was predominant, and a time basis would be used where the obsolescence factor was predominant. I think, however, that you are talking only theory if you are referring to a separation of factors for obsolescence and wear and tear in one depreciation rate.

MR. WICHMAN: That is pretty good theory. You say the machine is going to last ten years, carry 10 per cent per year. You say

it is going to produce in its useful life 200,000 pieces. Well, both of us are guessing. If the investment doesn't show a margin of 35 or 40 per cent, you probably wouldn't touch it in any case with all the hazards involved. That is my point.

CHAIRMAN BRECHT: May I ask this question, Mr. Blackie? When you figure out this productive depreciation rate—

MR. BLACKIE: I don't!

CHAIRMAN BRECHT: I don't think that is an insuperable difficulty. I think actually if you worked it out carefully it would bring you to approximately the same conclusion we have already made. You are going to line up your cost estimates on a certain volume of production. The volume of production presumably is the same for the old and new equipment. If that is the case, the only distinction I could possibly see where you might run into difficulty would be if you established this productive depreciation rate on the basis of the theoretical output of the machine. I don't know why you would want to do that. It seems to me, then, you would be walking around in pretty thin atmosphere. For a satisfactory productive depreciation rate, you would want to base it on the production expected of that machine. Are there any other points?

MR. CONTANT: I think in a study of this kind you have to assume that you are going to have at least normal use out of that machine.

CHAIRMAN BRECHT: That is right.

MR. CONTANT: You wouldn't even consider it if you didn't. I think there is another factor to be discussed here. If you had a machine that was fully depreciated, you would have one case, but if the machine you were considering discarding was only 50 per cent depreciated, that would be a different case.

ON WHAT BASIS SHOULD CAPITAL CHARGES BE COMPUTED?

CHAIRMAN BRECHT: We can raise that point in connection with question 4. On what basis shall capital charges be computed? For the old equipment, should we use the original cost? Should we use

its book value? Should we use its disposal value even though that disposal value is below the book value? And on the new equipment, shall we use the installed cost of that equipment or shall we add the unabsorbed depreciation, namely, the difference between the book value and disposal value which I have called sunk cost? Shall we add that to the cost of the new machine? I think this brings us to your point, doesn't it? There will be a difference in what the basis should be.

R. F. Lorz (*Superintendent, Standards Department, Kimberly-Clark Corp., Neenah, Wis.*): I concur with Mr. Swisher in continuing to use cash costs. In the final analysis you want to get an answer everyone can understand. If you add all these other things such as undepreciated balances, taxes and depreciation on the new machine, interest on investment, etc., you will end up with a lot of figures that are going to have to be interpreted to those who are going to make the decision to buy the equipment. In most cases they won't understand them. Therefore I would stick right to cash costs, the total cost of making the investment, and the actual cash savings that can be realized.

MR. EHMANN: I can't go along on cash costs only as a basis for deciding whether or not to replace an old piece of equipment. After all, if you put \$10,000 into a piece of equipment and only \$5,000 is recovered through depreciation, you are going to take a loss when you throw it away and spend another \$10,000 for another piece of equipment.

MR. WICHMAN: You have taken a loss.

MR. EHMANN: You can't keep buying new equipment, forgetting that you haven't yet received a full return on what you put into the old equipment. It may cost less to use the old equipment a little longer, even though it is less efficient, than to absorb a \$5,000 loss plus depreciation on the new equipment.

MR. MOSELEY: I think the way it is handled on your books is a factor to be considered. If you take that \$10,000 machine when it is only half depreciated and you turn it in on another machine, you must leave the balance of \$5,000 on your books and add it to the

cost of the new machine. If you scrap it without any residual value, you charge it off to your reserve for depreciation and take depreciation in future years on the balance of machinery left in your plant. If you sell it, you can take the loss on it. Probably you would have a loss if you sold it when only half depreciated. I think that has to be considered from these different angles.

MR. CAMERON: It seems to me that this part that has been lost is definitely lost. If you will remember, under rulings of the Securities and Exchange Commission such losses are supposed to be washed out entirely and not carried forward into succeeding periods. Certainly, if we made an error in the first five years, there is no reason why we ought to continue to accumulate that error and run it over another five or ten years of the life of the new equipment, or the hoped for new life. It seems to me that at the time we dispose of a piece of machinery we should definitely ascertain whether we gained or lost on the venture. The loss having been determined, the thing to do is to wipe it off and hope to calculate more accurately in the future.

CHAIRMAN BRECHT: I think that is a very sound observation. I agree with it completely.

MR. CATSIFF: I should like to take violent exception to any method of figuring other than disposal value of the equipment you are getting rid of. I think cash is the only thing that should be considered, not original cost or book value, but the value at the date of replacement. I have seen a \$100,000 piece of equipment which on the books was worth zero, but actually was worth a lot of money even though it was 35 or 40 years old. The disposal value is definitely the thing you have to take into account. Perhaps you put it in brand new yesterday; you still have a cash saving if you can find a better method to justify a new investment. Suppose you had to give the old machine to the junk man; what has that to do with it? It is still a good investment to get a better piece of equipment. I don't see where the book value is anything except plain bookkeeping.

WILLIAM F. ATWOOD (*Cost Accountant, Nashua Mfg. Co., Nashua, N. H.*): I would like to ask the gentleman who says he figures on a cash basis, what cash he puts out and what cash he gets a return on? How does he figure the cash he gets returns on?

MR. SWISHER: When you are talking about whether or not you make money on a particular venture or on a commodity, you must add to the cost whatever you paid for the replaced piece of equipment to get a long-time record of whether you made money on that venture. If you were setting up your costs as of tomorrow, you would certainly eliminate it, because it is a loss that has nothing to do with the new method of production. Accordingly, if you are making a factual study to determine whether or not you will invest some money, you want to talk about out-of-pocket costs—the amount of money you are going to spend in the future, not what you have spent in the past.

CHAIRMAN BRECHT: Citing again the engineer's point of view, sound practice suggests the disposal value on the old equipment and the installed cost on the new equipment.

There is no point in repeating the argument in favor of including those elements of cost as distinguished from the cash and carry group. It is to bring into perspective and make the full weight of the invested capital felt, because it is perfectly possible that if your guiding consideration is savings in cash cost, you may show a very substantial saving in direct labor costs at every comparison, and continue to buy pieces of equipment frequently; as a result you will soon find yourself running short of cash. I don't see how you can avoid such an experience unless you give weight to capital charges.

I have found the most peculiar practices in arriving at the base values for making capital charges. In one instance, the sunk cost is added to the installed cost of the new equipment, and then the disposal value is deducted, on the theory that they will ultimately realize this disposal value. But this is anticipating in the cost estimates the very thing these estimates are being used to decide.

In another instance, they say in effect, "We won't carry over the sunk cost, but we will deduct the disposal value from the cost of the new equipment." They evidently believe that the investment in the new equipment is represented by its installed cost minus the disposal value of the old equipment!

It seems to me these are all distortions; they confuse the issue. A series of cost estimates are developed that don't really mean anything.

UNIT BASIS VERSUS ANNUAL COST BASIS

CHAIRMAN BRECHT: Let's turn to question 5: "Should savings be computed on a unit basis or total annual cost basis?" In the examples you will see that no effort is made to use unit costs. The whole study is made on an annual cost basis, and that is in contrast to a great many equipment-buying formulas recommended by some machine tool companies where the savings are computed on a unit basis. Which do you think is the sounder method?

MR. ARMSTRONG: I would say both.

CHAIRMAN BRECHT: Let's have your line of reasoning.

MR. ARMSTRONG: If I were setting it up, I would compute it on the basis of both unit cost and the saving over a period of time, because it might give one answer in one case and an entirely different answer in the other. One might entirely take away the justification of the other.

Suppose we were to buy a machine that would be nice to have but which we can get along without; you might show a saving on those particular operations if you had that machine, but if you don't use it enough to have the savings amount to very much over a year or more, then it wouldn't pay to have it.

MR. WICHMAN: As a matter of fact, Dr. Brecht, I don't know just what the difference is between the unit method and the annual method. What is the difference whether you state your savings in terms of units or time?

CHAIRMAN BRECHT: It seems to me there are apt to be very real complications if you work on a unit basis. You compute the savings per unit of product. All cost estimates in the study are computed per unit of product.

MR. WICHMAN: Then what do you do with it? I don't see what good it does to divide it by the number of units.

CHAIRMAN BRECHT: If the unit savings don't tell enough, you attempt to compute annual savings, but from the unit basis. This is where real difficulties may be encountered. Unit costs may have been computed on the basis of capacity operation of the machine, and

that requires the introduction of some sort of allowance for idle time, and so on, to arrive at annual operating cost estimates. Such added calculating feats are not necessary when the annual basis is used. In other words, all charges are on an annual basis, and whether the equipment is operating at 10 per cent or 80 per cent or 100 per cent capacity makes no difference.

MR. WICHMAN: As I understand it, the difference is whether you use an average number of units actually produced or the theoretical rated production of the machine.

MR. CATSIFF: I didn't get your point either at first. I ran across a case similar to that where they were replacing a machine. They had taken the entire productive capacity of the new machine and figured their savings on that production, totally disregarding the fact that they couldn't possibly use more than 10 per cent of the output of the machine.

What you are bringing out by that question is a warning to guard against kidding ourselves. You can't make money on more material than you produce.

CHAIRMAN BRECHT: In other words, when you are working on a unit basis, be very certain that you have made ample provision for the real working pace of the machine, what it will be really called upon to do. It seems to me that difficulty can be sidestepped by using the annual basis suggested in the illustrations. Another point, of course, is that if you make a variety of products on a machine, there is the question of the proper unit of product to use. You get into the problem of working out some sort of weighted unit or common unit, but this is a difficulty which can be avoided by using the annual cost basis.

FORM OF THE ECONOMY STUDY

CHAIRMAN BRECHT: I want to raise a question about the form of the economy study in Question 6. That can be illustrated by the two types mentioned here in the examples: Method 1 and 2. In Method 1, in both instances you will notice that normal cost estimates have been used, that is, the cost estimate as you ordinarily would experience it. Notice that the depreciation in Method 1, Example 1,

is 10 per cent (straight-line method, ten-year life), and interest is computed at 5 per cent, the normal expected return. Notice again in Example 2, depreciation and interest computed at normal rates. Contrast that with Method 2, depreciation 50 per cent, depreciation 40 per cent, in Examples 1 and 2, respectively.

The advocates of the latter form of economy study are writing the repayment period test (previously discussed) into the cost structure. They are saying, in effect, "This machine, if it is worth while, must pay for itself in two years. Therefore, we will depreciate it at 50 per cent." That is literally writing it off in two years. If they were going to use the interest on the investment as the test, they would take the depreciation at normal rate, but if the equipment must demonstrate a 30 per cent return on the investment, they would compute interest at 30 per cent.

Now, when you have done that under Method 2 and you still show a saving, that saving is over and above the tests you have stipulated to determine whether this is a good buy or not. Which of those methods do you think is the sounder?

MR. MACKIE: I believe the first method would be the one ordinarily used in normal times. Probably the second method would be more applicable at the present time where you might have a possibility of machines being used during the emergency period only.

CHAIRMAN BRECHT: I believe that right now those studying this question claim that we should expand our test periods rather than narrow them. During the depression there were some companies that stipulated eighteen months as a repayment period. That was a period when new designs were coming out rapidly and the search for volume was very avid. There is no such search now. As a matter of fact, there may conceivably be a freezing of certain models or forms of machines, in which case, use of eighteen months or two years (and you may have heard of the two-year rule that was followed very blindly, in my opinion, some years back) is indefensible. Now perhaps you ought to think in terms of five or six years as the repayment period; otherwise you are going to handicap the replacement process unduly—you are going to expect the new equipment to show too much in the way of savings.

Certainly if you wanted to get your cash out quickly, Method 2 is an excellent way to handle depreciation. If you say, "Here, we need

EXAMPLE 1

Data

Present Method: Preparing sand for moulding operation by hand

Two men employed at 50 cents per hour

Work 8 hours per day, 280 days per year

Proposed Method: 50-inch spiral disc sand cutter

Installed cost \$2140.00 determined as follows:

Initial cost	\$1800.00
Spring cable reel	200.00
Contact reception sockets	40.00
Installation charge	100.00

One man will operate machine 2 hours per day
during years of 280 days

Hourly rate 50 cents

Repayment period—2 years

Method 1

Present cost of cutting sand

Labor—280 days x 16 hours x \$0.50

\$2240.00

Total annual cost

\$2240.00

Proposed Method:

Depreciation 10% \$214.00

Insurance 36.38

Taxes 15.62

Interest at 5% of Average Investment 58.85

Maintenance and repairs 50.00

Total annual fixed charges

374.85

Operating costs

Labor 280 x 2 x \$0.50

280.00

Power

74.00

Total annual costs

\$728.85

Annual saving (\$2240.00-\$728.85)

\$1511.15

Savings will pay for additional investment in

1.4 years $\left(\frac{\$2140}{1511}\right)$

Method 2

Cost of present method

\$2240.00

Cost of proposed method

Depreciation 50% \$1070.00

Insurance 36.38

Taxes 15.62

Interest at 5% 80.25

Maintenance and repairs 50.00

Labor 280.00

Power 74.00

Total annual charges

\$1606.25

Proposed machine will save \$633.75 (\$2240.00-\$1606.25) in addition to paying for itself in 2 years.

By both methods the purchase is warranted.

EXAMPLE 2

Data

Operation: Soaking raw silk

Present Method: 12 wooden tubs lined with Monel metal

Initial installed cost \$2100.00

Depreciation 10% straight line

Book value 420.00

Disposal value 120.00

Proposed Method: 1 single-bale soaking machine

Installed cost \$1500.00

Repayment period—2½ years

Method 1

Annual costs present tub method

Depreciation \$ 12.00

Interest 5% 3.30

Insurance and Taxes 2.40

Maintenance 24.00

Labor 1127.50

Water 247.50

Chemicals 3035.25

Total annual charges \$4451.95

Annual costs proposed method

Depreciation \$150.00

Interest 5% 41.25

Insurance and Taxes 30.00

Maintenance 25.00

Labor 880.00

Water 198.00

Chemicals 2548.25

Power 250.00

Total annual charges \$4122.50

Annual saving (\$4451.95-\$4122.50) \$ 329.45

Savings will pay for additional investment in 4.2 years $\left(\frac{\$1380}{329}\right)$ *Method 2*

Annual costs present method:

Depreciation 40% \$ 48.00

Interest 4.20

Insurance and Taxes 2.40

Maintenance 24.00

Labor 1127.50

Water 247.50

Chemicals 3035.25

Total annual charges \$4488.85

Annual costs proposed method

Depreciation \$ 600.00

Interest 52.50

Insurance and Taxes 30.00

Maintenance 25.00

Labor 880.00

Water 198.00

Chemicals 2548.25

Power 250.00

Total annual charges \$4583.75

Excess of costs under proposed method \$94.90

By both methods the purchase of the proposed equipment would not be made.

every penny we have; let's buy machines only where we can get our money out fast," then that suggests itself as a method. My personal objection to it is that it does tend to obscure your real cost estimates and injects a possibly confusing element. When you finally get a savings figure, it needs additional interpretation. The two methods will corroborate each other over a certain range of experience but not over the complete pattern.

MR. WICHMAN: You are taking a guess figure and splitting it into two guesses, and you may be hiding one of them.

CHAIRMAN BRECHT: I think that is very nicely put.

MR. WICHMAN: For another thing, it seems to me if you freeze this at 50 per cent you are assuming a prerogative of the executive. He might decide that a Warner & Swazey lathe is a perfectly sound investment, but that a very special type of automatic lathe is much more risky. Isn't that really something which should be left for executive decision? I favor the first method for that reason.

CONSIDERING THE ECONOMY STUDY

CHAIRMAN BRECHT: Let us take, then, for our closing question: How should the result of the economy study be considered? As a definite and final answer or as a guide to managerial judgment?

Shall we say that since the economy study indicates that a proposed machine is a good buy, we must make the purchase, or shall we rather use the results of the economy study as a guide in influencing, but not blindly conditioning, managerial decision. To the tangible considerations of the study must be added certain intangible factors before a second decision can be reached. As stated, the answer is obvious. We would all agree that it is a guide to managerial judgment, and that it is perfectly good medicine for management at times to depart from what the economy study might indicate. For instance, there is the question of the final influence of sunk cost. If it is a small item, as in these illustrations, indications of the economy study wouldn't be altered. But if we were thinking in terms of a new building, as a chemical company might whose three- or four-year-old building is becoming obsolete rapidly because of radical changes in process, we might hesitate a long time before taking a huge sunk cost

on the chin in our eagerness to get a new building. Again there is the question of the accuracy of your estimates and forecasts; that may accelerate or retard your decision. There is, too, the question of these taxes we talked about earlier; perhaps also the appreciation factor mentioned. In short, there are a number of intangibles that play on the decision and that management must weigh in its process of judgment.

I think the technique that we have examined here, while we have talked about it primarily in terms of the replacement of machinery and equipment, has a much wider application as a technique. We can find good use for it, it seems to me, in determining the relative worth of alternate opportunities for investment of capital.

Are there any further questions you want to raise? If not, I want to assure you that it has been a real pleasure to be with you this afternoon. I have enjoyed every minute of it and I hope that you carry something away from this discussion that is worth while and helpful. Thank you very much!

. . . The meeting adjourned at five-fifteen o'clock . . .

SESSION III
PRICE AND COST PROBLEMS OF THE
DEFENSE PROGRAM

WEDNESDAY MORNING, JUNE 25, 1941

DONALD M. RUSSELL, Partner,
Lybrand, Ross Bros. & Montgomery, Detroit, Mich., *Chairman*

HERBERT F. TAGGART is a native of South Dakota and received his education at the University of Michigan, from which he received his A. B. degree in 1920, his M. A. in 1922, and his Ph. D. in 1928. Except for several periods with the Federal Government and two years (1922-24) with the University of Kansas, Dr. Taggart has taught accounting at the University of Michigan since 1920. During this period he has been associated in public accounting with the firm of Paton & Ross of Ann Arbor. During N. R. A. days, Dr. Taggart served as Chief of the Cost Accounting Unit of the National Recovery Administration; during 1938 he served as Consultant in Distribution Costs with the Bureau of Foreign and Domestic Commerce; and during the past year he has been serving as Head of the Cost Accounting Section of the Office of Price Administration and Civilian Supply in Washington. Dr. Taggart is the author of several books and articles on accounting subjects and has appeared as speaker and discussion leader at several previous N.A.C.A. Conventions.

JOSEPH P. HEALEY received his training in Business Administration at the University of Buffalo. His accounting career began in 1926 as a Clerk doing cost work for Pierce Arrow. Two years later he joined the Curtiss Aeroplane & Motor Co. as Assistant Treasurer, which Company was later absorbed by the Curtiss-Wright Corp. At the present time he is Assistant Treasurer of the Curtiss-Wright Corp. and Controller of the Airplane Division—Buffalo Plants. Mr. Healy holds a Commission as First Lieutenant of Infantry in the U. S. Army Reserve Corps. For several years Mr. Healey has been active in the management of the Buffalo Chapter, of which he is now First Vice President.

PRICE AND COST PROBLEMS OF THE DEFENSE PROGRAM

CHAIRMAN McCULLY: The Chairman of today's session, one of the members of the Program Committee, is a member and a former President of the Detroit Chapter. His paper at the convention in St. Louis last year and the talks which he has delivered to several chapters of this Association during this year have had an important part in directing the attention of industrial accountants to their obligations to their business and to their country during this period of national defense preparation.

It is a particular pleasure for me to present our Chairman today, because during these months just past it has become my good fortune to gain the friendship of this man whom I have admired for many years. It is now my privilege to present to you, and to turn this meeting over to, Mr. Donald M. Russell, Partner of Lybrand, Ross Bros. & Montgomery, of Detroit.

CHAIRMAN RUSSELL: There has been waging for several months past a very active war right in these United States, a war of economic factors, a war between those tendencies of economic laws on one side to bring about inflation under conditions of limited supply and increased demand, and the government on the other side trying to prevent a run-away price inflation in this country. Your Committee has thought that we should go right to the front and bring one of the OPACS who are waging this war here to tell you the news from the front.

Professor Herbert F. Taggart is here today to present this picture, largely from the viewpoint of the government officials at Washington who are trying to prevent a run-away price inflation.

Many of you, most of you certainly, know Professor Taggart. He has been active in N.A.C.A. for many years. Somehow or other whenever there is an emergency in Washington, they seem to call for Professor Taggart. His regular post of duty is as Professor of Accounting at the University of Michigan, but in 1933 they called for him for two years in Washington to act as Chief of the Cost Account-

ing Unit of the Research and Planning Division of NRA. Again in 1938, when the Robinson-Patman Act came along, they called for him as Consultant on Distribution Costs in the Department of Commerce.

As you know, he is a well known author, particularly with respect to his books on minimum prices under the NRA, the cost principle in minimum price regulation, and his work on distribution cost accounting. He is a C.P.A., Doctor of Philosophy, a graduate of the University of Michigan, Director of Research of the American Accounting Association, member of the Michigan Association of Certified Public Accountants, a long-standing member of the N.A.C.A.

I am very glad to present at this time Herbert F. Taggart, who will present his paper on "Price Stabilization and Control."

PRICE STABILIZATION AND CONTROL

HERBERT F. TAGGART

Assistant Administrator in Charge of Accounting,
Office of Price Administration and Civilian Supply,
Washington, D. C.

I LAY no claim to being a spellbinder, but I can spell, and I do know something about the alphabet. Specifically, I think I can clear up for you some of the mysteries of recent additions to the alphabetical maze which has characterized Washington in the past eight years. In doing this I shall explain how the particular alphabetical organization which I represent is set up to do its job; what that job is and why we consider it important; something of our plans and the philosophy on which we operate, as evidenced by our actions to date; and, finally, why the program is important to you as cost accountants, and what you can and should do to help it along.

SPECIAL AGENCIES CREATED FOR THE DEFENSE PROGRAM

The fountainhead of all of the special agencies created for the defense program is the Executive Office of the President, and the co-ordinating unit within that office is the Office for Emergency

Management—the O.E.M. The O.E.M., however, is not an operating entity. It is rather a species of holding company—an agency established for administrative purposes with the task of making all of the several operating units of the defense organization fit into a logical mold—to prevent duplication of activities, overlapping of authorities, and actions at cross purposes.

The operating companies subsidiary to the O.E.M. are numerous and their functions are varied. The baby of the family is Mayor LaGuardia's Office of Civilian Defense—the O.C.D. Activities under the Lend-Lease Act are a part of the O.E.M.'s responsibilities. Commercial and cultural relations with South and Central America are promoted by another subsidiary. The oldest, largest and probably most important of O.E.M.'s subsidiaries is the O.P.M.—the Office of Production Management. Many people seem to think that O.P.M. is a generic name for the entire superagency establishment, and that Knudsen-Hillman rule the entire roost. Far be it from a member of another branch of the family to attempt to detract from O.P.M.'s importance which, in point of fact, can scarcely be overestimated. The O.P.M. is chiefly characterized by three P's—production, purchasing, and priorities—and if there are more important functions outside of those which may be performed by the armed forces, I can't imagine what they are.

OFFICE OF PRICE ADMINISTRATION AND CIVILIAN SUPPLY

With due obeisance, then, to the O.P.M., may I turn to the O.P.A.C.S., the Office of Price Administration and Civilian Supply—called Opacs for short. This office was established by Executive Order No. 8734 on April 11, 1941. This order, which constitutes our company charter, gave us four principal duties or responsibilities.

These are:

- (1) Control over prices.
- (2) Stimulation of supplies of materials and commodities for civilian use, once military needs have been met.
- (3) Equitable distribution of those materials and commodities among competing civilian groups.
- (4) Protection of consumer interests.

The charter also created a board of directors, or perhaps more accurately, a committee on policy, of which Leon Henderson, the Price Administrator, is chairman. The other members are the Secre-

tary of the Treasury, the Secretary of Agriculture, the Federal Loan Administrator, the Chairman of the Federal Trade Commission, and the Director General and Associate Director General of the Office of Production Management. This committee ties together most of the federal agencies which are directly concerned with price stability. It provides a medium of interchange of information and advice which is very helpful in the work of Opacs.

Organization of Opacs

Opacs has been so recently set up that its organization chart is hardly in shape to be published. I had hoped to be able to bring you at least a tentative chart which you could follow as I talk, but no such chart is yet ready for release. Very roughly, however, Opacs may be likened to a manufacturing enterprise with four direct or productive departments and three indirect, non-productive, or as I prefer to have my students call them, service departments. These departments we call divisions.

The four productive divisions correspond to the four principal functions allotted to us by our charter. The Price Division is, of course, the principal operating group; price administration centers here. In this division all actions with respect to prices are decided upon. The division is organized principally along commodity lines, and consists of a number of units or sections, each devoted to a particular commodity or group of commodities, such as non-ferrous metals, iron and steel, textiles and so forth. This division has inherited most of the responsibilities of the former Price Stabilization Division of the Advisory Commission to the Council of National Defense.

Civilian supply activities are shared by two divisions, one being responsible for the encouragement of production for civilian use, and the other having the task of allotting to competing civilian uses such supplies of goods as may be available after the needs of the Government have been provided.

It is peculiarly appropriate that Opacs should contain the counterpart of O.P.M.'s production division, since a cardinal principle of Leon Henderson's philosophy of price control is that increasing the supply of goods is the best way to counteract a rise in the price of goods caused by scarcity. Needless to say, this division will co-operate actively with its O.P.M. relative whose primary interest is production for the military.

Civilian allocation corresponds in some degree to the priorities division of O.P.M., and the work of these divisions will likewise be co-ordinated. It is often asked why we do not let the price mechanism allocate civilian supply, once the Government has taken what it requires of a given commodity. If the price of the remainder were allowed to rise, it is argued, the less essential civilian uses would automatically be eliminated, and the supply would be absorbed by those uses which are most important, as evidenced by their willingness and ability to pay the required price.

In certain instances this reasoning might be correct, and in such cases entirely satisfactory civilian allocation might be achieved by this method. Generally speaking, however, the method could not be relied upon to produce the results which would best serve the purposes of civilian morale, or even of civilian economy. In the case of many consumers' goods, for example, the wealthy would obtain ample supplies while the masses went without. In the case of producers' goods, the price mechanism might very well direct investment into unessential lines, a result which, in the long run, would be detrimental to the country. Furthermore, obviously, letting prices run riot in the hope of achieving a proper allocation of goods would result in the very inflation which Opacs is attempting to prevent. Hence, although the task is admittedly a difficult one, civilian allocation is being attempted on a planned basis.

Along with the price controlling activities of the former Price Stabilization Division of the Advisory Commission, Opacs has inherited the consumer-protection functions of the Consumer Division. Miss Harriett Elliott still heads the Consumer Division of Opacs, as Associate Administrator, and the functions remain much the same, except that efforts to control prices have all been consolidated in the Price Division.

Service Departments

So much for the direct or productive departments of Opacs. The three service departments are research, legal and accounting. The Research Division carries on fundamental studies in defense economics and finance, without which the actions of the operating divisions could not be intelligently taken. The Legal Division performs the necessary function of seeing to it that the formalities are given due consideration and that no ultra vires acts are attempted. The Legal Division also will presumably be entrusted with whatever

compliance machinery may be established. The Accounting Division examines the cost and financial data of individual companies and entire industries and assists in determining the reasonableness of price actions and of claims for exemption from price schedules. Industry-wide surveys of costs, it is expected, will be conducted by the larger accounting staffs of other governmental agencies, working in collaboration with our Accounting Division.

Fundamental Purpose of Opacs

I always find myself apologizing, in talking to a business-wise group like this, when I approach the explanation of why it is important that Opacs' job be well done. Occasionally, the best of us forgets the clearly essential ends to be achieved when the difficulties of doing an unpleasant job seem overwhelming. It is worth while, therefore, even at the risk of boring some of you, to call attention to a few facts.

Probably all of you have seen charts which depict the history of prices in this country during the last 150 years. You have seen in such charts three striking peaks, like mountain ranges towering above the plains. These peaks have occurred during major warfare—one about 1812–15, one about 1861–65, and one about 1918–20. Each one seems to be attempting to outdo the others in steepness, and all have a common feature to which I should like to call special attention: the down side is just as steep as the side going up.

When I was in high school I spent a lot of time on Latin, and among other things I read Virgil's *Aeneid*. In this poem Virgil takes occasion to make a comment which, freely translated, means, "The down-hill road to Hell is a fairly easy one to travel, but the way back up is difficult and painful." In case of prices, Virgil's statement holds true in reverse. The way up is the easy one, and the down-hill road is beset by many difficulties. Again reverting to my early training, we were taught in our economics courses in college that periods of rising prices are periods of optimism. Goods tend to change hands freely; stock markets are busy; investments are made; employment increases; production rises. The political party in power likes periods of this sort because its chances of re-election are bright. Such periods have their darker aspects, of course, but they are usually forgotten. The bondholder, the salaried employee and the other fixed-income people find that their purchasing power has declined. Since not all prices rise simultaneously and uniformly,

many economic readjustments are necessary. These are minor pin-pricks, however, and are likely to be overlooked in the hustle and bustle of expanding activity.

Now, see what happens when prices go down. Inventory "profits" are replaced by losses; stocks go down; industrial operations are suspended; workers lose their jobs, and those who don't have their pay cut; profit and loss accounts are balanced by red figures; pessimism prevails; economic readjustments are both more numerous and more painful.

Most of you remember what happened in 1921. The honeymoon was over. Prices, which had reached a dizzy height, dropped with a thud. The business community awoke as from a hypnotic dream. What had seemed to be profits melted away like the proverbial snowball. I have yet to hear anyone say that he would like that experience repeated. Every businessman who comes to Washington approves and applauds the plan to keep prices on a more sensible basis this time.

What we are trying to do, then, and with your help and that of the rest of the business community what we will do, is to level that peak, so that the pathway down the other side will be neither so steep nor so long. In doing this, curiously enough, some of the grief which would attend that downward journey must be encountered now. We must frequently inject a note of pessimism into an otherwise rosy picture. We must often thwart apparent opportunities to make a profit out of the current situation in order to avoid the losses which would otherwise follow. Therefore, when we are condemned for being short-sighted obstructionists, when we take actions which are temporarily unpopular, when we are accused of being unrealistic, when we have to get tough to attain our ends, we can take comfort in the thought that we are vicariously suffering for those who would be trampled on the down-hill side; and we know—for we have been told—that we have the fundamental approval of those who learned their lesson during the last war.

In view of all this, it is unnecessary to dwell on the often quoted statement of Mr. Baruch that the last war cost the United States Government—which means you and me and all the rest of the taxpayers—15 billion dollars more than it should have on account of price inflation. We are interested in reducing the cost of the defense program to the Government, of course; but we are far more interested in reducing the cost of the whole turn of events to the entire economy

Voluntary Agreements

Opacs has not yet published a comprehensive statement of policy. Perhaps it never will. Some partial statements of policy, however, have been made by Mr. Henderson and other members of the staff in publications and addresses, and some inferences as to policy may be drawn from the actions which have been taken to date.

One inference that may fairly be drawn is that we hope, as far as possible, to carry out the purposes for which we have been made responsible by voluntary action by industry itself. Agreements to maintain voluntary price ceilings have been, and are being, negotiated between individual members of industries and the Price Administrator. Some of these have been more or less formalized and given considerable publicity, while others have not. Such agreements relate to maximum prices only and permit any degree of selling at lower prices. Generally speaking, the agreements have not been made with every member of the industry in question; but, rather with a sufficient number to be representative and to control the bulk of the market. It might be supposed that those who have not signed up would feel free to sell at higher prices, and we have no doubt that this has occurred in some cases; but, in general, these voluntary agreements have worked very well.

The advantages of voluntary agreements are obvious. Co-operation is always to be preferred to coercion. Voluntary agreements require no machinery for enforcement; they tend to enforce themselves. Also, the voluntary method leaves considerable flexibility as to pricing and marketing methods, and leaves the marginal or peculiarly situated concern free to make its own adjustments.

The imposition of a formal ceiling schedule does not do this. Formal price schedules are apt to be less generous than voluntary agreements, and exceptions can be granted only upon thorough examination of financial data and other evidence that relief is required. The voluntary arrangement gives the well-intentioned business man a clear stake in its success, and it is to be hoped that this informal, flexible procedure will continue to flourish.

Another fact which stands out from a study of the actions to date is that Opacs has no intention of being unreasonable and unrealistic. No schedule has yet been issued which does not provide for continuous study to observe its effects and to lay the foundation for needed revisions. All schedules provide for exceptions in cases of particu-

lar hardship, and such exceptions have already been granted, to the complete satisfaction of affected parties. Such provisions obviously multiply the problems of administering the price schedules, but it is hard to see how the schedules could be both effective and fair without them. The alternatives would be arbitrary action which might result in putting members of industries entirely out of business, or price schedules so high as to require neither revision nor exception.

Concerned with Three Kinds of Prices

A study of the prices with which Opacs has thus far been chiefly concerned reveals a determination to put first things first. Three kinds of prices have engaged our principal attention: those which have the broadest effect upon the economy as a whole, such as steel and other basic raw materials; those which are most volatile and subject to speculative influences, such as secondary metals and items traded in on the commodity exchanges; and finally, (and this should be of special interest to this audience) those which constitute the costs for later stages in production.

This last preoccupation we have found to be one of our greatest sources of strength, since it has been possible in conversations with converters and fabricators to point out that we have been of material assistance to them in keeping costs down. We consider it a real triumph when we are able to assist an industry which is doing a good job of co-operation by reducing or stabilizing some of its costs.

It would be a mistake to suppose that Opacs is solely concerned with those commodities which are used in large quantities by the military services. A part of the purpose of price stabilization is to minimize defense expenditures—but only a part. The cost of the defense program cannot be measured by Government expenditures or by the size of the national debt. The total cost can be expressed only in terms of the cost of living of the common man and of the disruption of economic processes and the changes in relative position of the several factors of production and commerce. It is this total cost with which we concern ourselves. This is well illustrated by the attention recently given to such commodities as black pepper and coffee.

Attitude Toward Low Prices

It would be a mistake also to assume that Opacs is interested in low prices and only in low prices. We intend to keep prices down, it is

true, but not at the expense of production. In certain cases we have watched prices rise with the greatest equanimity, since it was evident that only by increases in price could we obtain that expansion of production which is the basic requirement of the defense effort. Such cases are few, however, and it is equally true that in many fields increased prices do not bring about added supplies. They merely serve to determine who gets the existing supply, a task which we should prefer to see accomplished in a better way. In certain cases, in fact, increasing prices may serve to dry up supplies by resulting in inventory accumulations and speculative hoarding. One of the best cures for hoarding is the certain knowledge that the price is not going up.

A cardinal principle of Opacs is that price increases solely caused by increased demand will not be tolerated. Where price increases are not justified either by increases in costs or by the reasonable hope of increased supply, but are solely occasioned by a sellers' market, no sympathy need be expected. Sometimes the party who increases his prices under these circumstances says that he is merely trying to discourage excessive demand—he is only fighting off too-insistent customers. You all know without my telling you that, however effective such a move may be in normal times, it has no effect now. Demand is inelastic. The buyer will pay whatever is asked in order to assure himself a supply. In fact, buyers are, broadly speaking, just as guilty as sellers of pushing prices up in many cases. When a buyer of a raw material sees his inventory slipping, and fears shortage of transport and other problems of supply, he is likely to bid prices up. That is perhaps the most serious single problem of price administration.

Viewpoint Toward Two Reasons for Price Increases

Two other attitudes of Opacs with regard to causes or excuses for price increases are worthy of comment. One is that, although we recognize the importance of actually sustained increases in costs, we look very unsympathetically on the notion that prices must be increased now to take care of vaguely feared cost increases which are expected at some indefinite time in the future.

We fully appreciate the forward seller's difficulties, but both the common practice of quoting no prices at all, and that of adding a substantial cushion to cover unforeseen events, are direct roads to the inflation and spiralling of prices which it is our job to prevent. Both practices are an open invitation to step in with a price schedule.

Another argument with which we are frequently confronted is that

the particular concern or particular industry has suffered heavy losses over past years and must now be allowed to make these up. A variation of this is the argument that the industry in question is one in which seven lean years follow every fat year. This—the year 1941—is the proverbial fat year, and we must let the industry put on a little fat to take care of the lean years ahead. There are several answers. One is that, after all, this fat year is a result of the defense program. It is not a natural, but an artificial business boom. The principle has been enunciated that we are to have no wartime millionaires. The putting on of fat, therefore, must be in strict moderation. Another answer is that already Congress has made the putting on of fat a pretty difficult operation, and that the surest way of creating strong sentiment for making it impossible is the attempt to obtain abnormal profits by excessive prices. Any business man who can see beyond the end of his nose must appreciate this.

Adoption of Formal Price Schedules

It is a temptation to talk about the formal price schedules which have been promulgated, as if they were more important than the many actions which have been taken to relieve pressure on prices in other ways.

I doubt, as a matter of fact, if anyone in Opacs would fail to agree that the informal and sometimes little publicized actions which have been taken are of much more fundamental importance than the published price schedules. Such actions include the encouragement of imports, the discouragement of exports, the stimulation of production, the promotion of the use of substitutes, and, above all, the everlasting preaching of the gospel of price stability to individual business men and business groups, resulting often in nothing much more tangible than a proper frame of mind and sometimes in fairly tangible price agreements. These things have been the preoccupation of the entire organization since the Advisory Commission was established in May, 1940. No formal price schedule was even issued until February 17, 1941, and only nine have been adopted to date including one which was canceled.

These nine price schedules are, however, worthy of some examination. No less than five of them have covered secondary materials and products. The first schedule fixed maximum prices for second-hand machine tools, and four others deal with metallic scrap: aluminum, zinc, iron and steel, and nickel. In all these cases the mar-

ket was an extremely volatile one. In all cases the effectiveness of somewhat higher prices in bringing out additional supplies was unquestioned; but, equally certain was the fact that a runaway market would cause hoarding and bring speculative gains in the greatest amount to the least patriotic and co-operative. In every case the commodity in question was an important cost element in a later stage of production.

Recent Price Schedules

Price Schedule No. 5 was an attempt to choke off panic and gouging in bituminous coal during the period of the strike. Here Opacs was fortunate in dealing with a price structure already well founded on bases provided by the Bituminous Coal Division. As soon as the danger was ended, the schedule was rescinded.

Price Schedule No. 6, covering iron and steel products, also had its origin in a labor dispute, and was established to forestall a possible runaway situation in perhaps the most basic of all American industries and the most important both from the military and the civilian viewpoints. It was issued with the express promise that due consideration would be given to its revision as soon as the effects of the wage increases in the steel industry could be properly evaluated.

The most recent price schedule, No. 9, covers domestic hides, kip and calfskins, including transactions in futures on the Commodity Exchange. The schedule was issued in order to check heavy forward buying of hides and leather products based on unwarranted fears of a hide shortage. An interesting feature of the Schedule is that it provides no differentials or seasonal adjustments for various grades of hides. It is stipulated that in no case shall the price of any grade exceed 15 cents a pound, thus leaving the development of differentials and seasonal adjustments to the normal operation of the market. This schedule also clearly illustrates the desire of Opacs to maintain, as far as possible, the normal channels of distribution.

Cost Aspects of Price Schedule Covering Combed Cotton Yarn

Some comment on the cost aspects of Price Schedule No. 7, covering combed cotton yarn, may be of interest. This schedule was issued only after the market, in that important element of cost for subsequent stages of the textile industry, had run away with itself. Without passing any judgment as to who or what was to blame, it had become evident that inflation in a serious form had struck this particular segment of the market. There was a substantial increase in the

prices of combed yarn between August and December, 1940; the price of 30s single, for example, rising from an August average of 31.30 to 37.00 in December. During January there was very little change in combed yarn prices, but in the first week of February they again began to increase. By May 1, when a conference was held with representatives of the spinners, 30s single had increased to 49 cents from 37 cents in the latter part of January, or by almost 33 per cent. There were further increases after the conference and the quotations reached an average of 51½ cents by May 17, when it was decided that a price ceiling was necessary. Over the whole period from August, 1940 to May 17, 1941, the price of this particular count had increased approximately 65 per cent and had reached a level of 6½ cents higher even than the 1937 peak.

The increased prices of combed yarn were not, except to a limited extent, necessitated by increases in the cost of cotton. In other words, the price increases resulted in substantial increases in the gross manufacturing margins of the combed yarn spinners. Thus, the cotton cost for a pound of 30s combed yarn averaged 16.06 cents in August, 1940. By the week ending May 17, 1941, the cotton cost had increased to 19.33 cents, or by slightly over 20 per cent. Meanwhile, the gross manufacturing margin for 30s single increased from an average of 15.24 cents in August to 32.17 cents by the week ending May 17, an increase of over 110 per cent. This level of manufacturing margins is over 40 per cent higher than the average margin in the peak month, April of 1937.

There may have been some increases in the other costs involved in yarn manufacture. To date, however, the actual increase in labor cost would probably only justify an increase in the manufacturing margin of 5 per cent since August, 1940. Any such increases have been largely compensated for by volume operations. According to information from the Cotton Textile Institute, the average number of hours operated per active spindle in combed sales yarn was 72 in August, 1940. In the last two months, the average hours of operation ranged from 95 to 100. This greatly increased use of existing machinery must certainly have resulted in all the savings in overhead which come from capacity operations. Thus the period under discussion must have been one of considerable profit for those spinners who sold yarn at the levels existing since the first half of the year.

In the meeting on May 1, representatives of the spinners stated that current price levels were to a large extent fictitious. Actually, it was said, very little yarn had been sold at such prices, since the price

at which the yarn in production (as of May 1) had been contracted for averaged about 36 cents. The spinners indicated they did not favor current price levels, and, in fact, that the level which would call forth the maximum output of combed yarn had been passed several weeks before.

This is substantiated by the fact that by the middle of March, when the price of 30s single reached 42 cents, 72,000,000 pounds of combed yarn sales had been booked for future delivery. This equals about five months' production. Apparently, spinners of combed yarn found a price which averaged considerably less than 42 cents attractively remunerative in the first three months of this year.

The conclusion to be reached from the price and margin increases and from the spinners' statements was that an uncontrollable price trend had set in. In view of the fact that combed yarn constitutes an important raw material in textile processing, it was deemed of great importance to exercise some control over the price by official means. When the schedule was issued the price of 30s single was set at 42 cents, which yields a manufacturing margin of 22.67 cents, or almost 50 per cent higher than the margin obtaining in August, 1940.

Price Schedules as a Last Resort

Thus a review of the formal actions taken to date does not reveal any very radical tendency in the direction of either arbitrary or all-inclusive price control. Price schedules have been used only as a last resort. We prefer other methods as being at once more flexible and more efficacious. In general, we have found industries most willing to co-operate and more than anxious to keep their own back yards swept and dusted.

The importance of Opacs' mandate and methods to you, as cost accountants, should be fairly clear. Its importance to you as citizens and consumers needs little more than mention. Most of you are in the fixed-income group whose standard of living will be adversely affected by undue rises in general—and it should be noted that unreasonable increases by your own firms inevitably contribute their bit to the tide. Many of you are in a peculiarly vulnerable position if and when the tide recedes from an unjustified level. You are overhead, as many of you discovered during the late depression. As citizens you are vitally interested in the success of the defense program, and it is my belief that spiralling prices constitute a grave threat to the defense program and the financial stability of the nation.

The Cost Accountant and Price Stability

As cost accountants you have two very important functions with respect to price stability. In the first place, you are advisers on price and production policies. This function cannot be intelligently performed in these days without taking into account the possible effects of certain policies on the general price level and the success of the defense effort. Obviously, proposals to increase prices should be scrutinized with extraordinary care to see if the increases are actually necessary and what their long-term effect will be. Obviously, also, questions of stepping up the pace of operations, of plant expansion, and of reopening old facilities should be regarded in the light of probable benefits to the defense program, and to the country as a whole, rather than with an eye solely on the balance sheet. Occasional disregard of a few dimes in the stockholder's pocketbook this month or this year may pay long dividends in sustaining the democratic regime in which the stockholder prefers to live. The value of that is very great; the price is very small.

To get somewhat more technical, I should like to point out what I consider a very real danger in the current situation from the standpoint of the cost accountant—a danger which I know some of you have already recognized and against which you are striving to guard. I refer to the laxity in controlling costs which is bound to show itself in times of bustle and prosperity. The cost accountant, as I have remarked before, is in a peculiarly vulnerable position. In times of stress, when business is at a low ebb and the well-conceived economies which the cost accountant is able to bring about are most greatly needed, he is apt to be among the first to get the ax; the unfeeling employer cuts him off just when he could be at the greatest peak of his usefulness (granted, of course, that this is sometimes the cost accountant's own fault). Contrariwise, in periods of boom and prosperity, the cost accountant's pleas for economy—for strict control of costs—are apt to fall on deaf ears. Why bother with such details when it is so much easier to open the spigot a little wider and let an enlarged flow of incoming dollars do the trick?

This reckless disregard of all the things for which you have been fighting—as amply evidenced by the briefest perusal of the subject matter of twenty-two International Cost Conferences—is one of the most serious enemies of price stability.

Determined efforts on your part to maintain the gains you have made along the lines of sound management will not only preserve

the position in industry which you have attained, but will constitute an important contribution to the efforts which we in Washington are making to meet the problems of the present emergency.

CHAIRMAN RUSSELL: Professor Taggart, I would like to express our appreciation of your splendid paper. I have reason to know that Professor Taggart is working twelve or fourteen hours a day, and we certainly appreciate his preparing a paper under these circumstances.

For our second paper this morning, we have gone directly to an industrial accountant who has been wrestling with defense contracts in the airplane field. Mr. Joseph P. Healey is going to talk to us on "Defense Contracts and the Industrial Accountant." Mr. Healey received his training in business administration at the University of Buffalo. He began his business career with Pierce Arrow. In 1928, he joined the Curtiss Airplane & Motor Company as Assistant Treasurer, and when that Company was absorbed by Curtiss-Wright Corporation, he became Assistant Treasurer of Curtiss-Wright Corporation. He is also Controller of the Airplane Division of the Buffalo Plants.

Mr. Healey is also an army officer, holding a commission as First Lieutenant of Infantry in the United States Army Reserve Corps. He has been active for some time in the management of the Buffalo Chapter and is first Vice President of that Chapter. Mr. Healey.

DEFENSE CONTRACTS AND THE INDUSTRIAL ACCOUNTANT

JOSEPH P. HEALEY

Assistant Treasurer, Curtiss-Wright Corp.,
Buffalo, N. Y.

THERE IS much more to be said about the industrial accountant's role in the present defense program than could be said within the time allotted. This paper is not presented from a technical angle, but rather from a practical angle, pointing out how various problems in connection with defense contracts have been dealt with. It should

not be construed as an interpretation of the law, generally accepted practice, or the approved solution.

The process of girding the loins of the nation has become a job of first rank in which all of us are feeling the impact in varying degrees. One fact is certain at least: All of us have a common job—the job of seeing to it that we do the best we can, of as much as we can, toward providing the nation, not only with its requirements in armaments and munitions to supply war needs, but also continuing to provide the material items upon which depend the well-being of the civilian population. As we go along this road more of us day by day will begin to take part, either immediately or remotely, in business resulting from defense contracts. We may become prime-contractors or sub-contractors. The closer we approach prime-contracting, the more sharply we become aware of varying degrees of control: control over raw materials, labor, power, transportation, capacity, and capital; control over quality and quantity; control over price, and over cost. Not only is control from without inevitable, it is also necessary, we must all agree, whether we like to or not.

Role of the Industrial Accountant

Our role as industrial accountants is not a simple one. Our problems, as well as those of other professionals, will become increasingly more complex. To us particularly, however, is handed the responsibility and burden of meeting adequately, satisfactorily and justly, the many types of accounting needs which are developing. It is our job to protect the interests of the industrialist and those of the Government. At times, perhaps to us altogether too often, it will seem that these interests are divergent, incompatible and irreconcilable; but fundamentally, they *are* common in the one basic incontrovertible fact that the cost of those products sold under defense contract business must be a fair and reasonable cost; a cost which makes for a price out of which there can be no profiteering, but one which guarantees the producer a just return on his outlay. As accountants it is our job to see that every legitimate allowable cost, under cost concepts which have grown from the various laws and regulations affecting defense contract business, is included to the last penny, and that not one penny of unallowables are. While we may not wholeheartedly agree with the philosophies under which many unallowable costs have been so classed, we must, nevertheless, abide by the rules. Speaking realis-

the position in industry which you have attained, but will constitute an important contribution to the efforts which we in Washington are making to meet the problems of the present emergency.

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tically, I may point out that the pill may be a bitter one; but the sooner it is taken, the sooner one is rid of it. I think a most beneficial step toward reconciling our thinking in this matter of cost is to consider the Government's attitude which, according to Don Russell, has traditionally been to consider cost, not the "actual cost to the contractor" but the "actual cost of benefit to the Government."

In 1932, almost a decade ago, there was born out of a series of deliberations instigated by the principal manufacturers of airplanes and aviation engines, in which the Army Air Corps Audit Section played a prominent part, a uniform system of accounting for the aircraft industry. It was purposely designed to be a broad outline, one under which considerable latitude was existent. There has been distributed to you a copy of the Master Chart of Accounts set up at that time. (See Exhibit 1 at the end of the article.) I think the basic features of the system are today followed by most, if not all, manufacturers of airplanes and engines. This is introduced at this point, not to indicate that you should expect the Army, Navy or other government offices to come into your industry or individual concern and set up a definite system of accounting, but rather as some small evidence of the fact that you have reason to expect a great deal of co-operation from government auditors. I don't believe there is any ground for apprehension that your existing accounting system will be upset or remolded by government auditors so long as it is capable of producing the required information for the ascertainment of cost as circumscribed in the effective laws and regulations. As a matter of fact, the Government has not been unreasonable in cost determinations.

Cost Determination and Government Regulations

We have been talking about costs and therefore it is logical to propound the question: What type of cost keeping must be followed? This question cannot be answered briefly nor specifically. First of all, we must bear in mind that the Government is primarily interested in costs specified under the effective acts and regulations, of which the Vinson Act (also known as the Vinson-Trammel Act) as amended by the second Revenue Act of 1940 (Excessive Profits Tax Act); T. D. 4906, T. D. 4909, and T. D. 5000 are perhaps the ones which will govern in most cases. While these refer specifically to naval craft and aircraft for the Army and Navy, it seems quite probable that T. D. 5000 in particular will be adopted as a basic cost-defining doctrine for application to defense contracts issued by other branches

of the Government. T. D. 5000 may very well be regarded today as the bible for the aircraft industry and that it may become so for all other industries, as well, in so far as defense contracts are concerned, is not outside the realm of conjecture.

Auditors for the Government are being stationed at most plants of prime-contractors and large sub-contractors; however, those plants which do not have a resident auditor will be subject to audit by travelling auditors who will make exhaustive studies and check your costs minutely. We have enjoyed good relationships with these representatives of our best customer and commend them to you, if you have no skeletons in your closet.

Exhibit 2 is an outline of the principal features regarding accounting in T. D. 5000. I call your attention particularly to the section under Methods of Allocation Ordinarily Accepted. One thing which is noteworthy is the fact that the basis of distribution is direct labor except in the case of administrative, order and bidding, and service expenses. The use of direct labor as a basis for distribution presumes that you will have an opportunity of recovering overhead expenses on an equitable basis, provided there are no radical differences in departmental operations, and that products requiring a large share of operations from high overhead rate departments, or vice versa, wouldn't be purchased by the Government to the exclusion of others.

To illustrate this point, let us take the case of a manufacturer having a large machine shop, with expensive equipment and several bench departments where hand operations are many and capital investment is comparatively small. Obviously, the use of an over-all average overhead rate on all operations would be to the benefit of the Government if only machined parts were contracted for from that manufacturer. A remedy in such a situation is the use of separate overhead rates for separate departments. This is an especially important factor when estimating prices for defense contracts.

In the case of airplane manufacturers, the use of an over-all average rate, while perhaps not theoretically and technically correct, may be justified in the light of practicality and expediency in consideration of the fact that as a general rule a sufficient proportion of spare parts is usually ordered and results in fabricating operations in all departments in such proportions as to minimize the dangers of loss through unbalanced production which may be present in an over-all average rate.

Material Costs

I need make no extended academic discussion of what are, and what are not, material costs; nor, on the distinction between direct and indirect materials. Instead, I shall devote a little time to the importance of careful accounting for materials, to wit:

- (a) Internal control on payment of vendor's invoices require proper receipt of the goods in quantity and quality specified, evidenced by adequate records.
- (b) Requisitions for withdrawals from stores must be complete and authentic.
- (c) Pricing must be uniform and on a sufficiently sound basis so that prices used in charging materials to production can be substantiated by evidence in paid invoices if it becomes necessary to produce such evidence for government auditors.

I can cite cases in our own experiences in which there have been turned back for correction, material requisitions involving adjustments of less than \$25, regardless of the fact that the contract affected was one valued in millions of dollars.

Waste and spoilage losses, as we all know, should be segregated into normal waste and definite spoilage elements. The question arises as to how these may be treated in defense contract costing. There is ground to adopt the stand that normal waste is a legitimate cost and is allowable in every case; spoilage resulting from operating causes also would seem to be an allowable cost chargeable to the specific contracts against which operations are being performed. A third type, which is more of a pseudo-spoilage, results from engineering changes originating with government engineers after a contract has been entered into. This, I venture to say, is unanimously agreed to be an allowable cost against the specific contract.

Is the element of waste and spoilage preferably handled as a direct cost item or as an overhead item? I think argument pro and con can be developed with little difficulty. It seems obvious that the rule of reason must prevail and each case must be handled on its merits. In some instances treatment either way may make little difference; in others possibly only one way can be followed. The important point, however, is that those engaged in producing for both defense contracts and for ordinary commercial purposes may be well advised, if it is possible to do so, to see that costs from spoilage and waste incident to commercial production, are not included among those on

defense production, as may conceivably result when they are treated as overhead items.

Treatment of income from sales of scrap and defective materials will follow the same general rule. Credit to defense contract costs should be made for scrap sales resulting from production on the contract. This, of course, may from a practical angle be difficult to follow, especially if the effort necessary to maintain accounting segregation is beyond reasonable proportion; yet it might be necessary at some later date to prove that a reasonable effort to do so had been expended and that in the final analysis the end result would have shown little effect.

A very difficult problem occurs in the case of inventory losses of the type resulting from reduction of book value to the cost-or-market, whichever-is-lower basis.

Labor Costs

Careful timekeeping, to a greater degree than ever before, would seem to be the order of the day if labor cost control from this approach is a proper one; and in my opinion it is, especially in the case of producers doing work on defense as well as non-defense production.

Treatment of excess cost due to overtime may possibly be an important question. Is overtime due to expanding production volume or to inefficiency? Is it due to shortage of skilled employees? Is it due to defense contract work or to commercial work? To which is it legitimately chargeable? These are some of the questions which will occur to the accountant. The best policy in attempting to decide the course of procedure in treatment will stem from the rule of reason and the doctrine of supportable action. If an impartial analysis of the attendant circumstances indicates that the prime cause for the overtime is defense contract work, then it would appear legitimate to charge such costs to such work. On the other hand, it is generally a matter of considerable difficulty, if both commercial and government work is produced, to determine which type of production is causing the overtime; consequently, the most equitable method, and the one followed by certain airplane manufacturers, is to consider overtime as an overhead item. In this manner each type of production, commercial and defense, bears a share proportionate to the volume thereof, as based on the direct labor cost of each.

Overhead Costs

The best guide to treatment of overhead costs is T. D. 5000. If the volume of defense production is fairly large, it might be advisable to make some changes in the accounts to the end that unallowable costs are segregated into special accounts and thus facilitate the preparation of reports and the determination of overhead rates.

Although it is specified in T. D. 5000 that overhead is to be allocated on the basis of direct labor, it would hardly seem reasonable to assume that the Government will require those concerns which have been using different methods of allocations, to change, if such methods have been long established and have been built up on an equitable basis. It would seem that again each case must rest on its own merits. A thought to be considered with interest in this connection is that if the direct labor basis of allocation of overhead does not result in costs that are inequitable, nor costs which differ too much from whichever method is currently in use, then it might be well to change to the direct labor basis. After all, it is no uncommon thing in normal business for concerns to fit certain procedures to satisfy the requirements of large customers, particularly if those customers are good customers; and who can deny that Uncle Sam is rapidly becoming the most important customer of many of us?

An interesting problem is encountered with respect to the time basis for determination of an overhead rate. If a contract is produced over a period longer or shorter than a year what rate of overhead applies? Generally speaking, government auditors may be expected to calculate a rate based on the length of time during which production on the contract was in effect, even though this period extended more or less than a year.

Special tools necessary to the manufacture of a specific model are recognized as an item of cost and included in selling price of the airplanes. The labor to construct such tools in the manufacturers' plant is considered as Direct Labor-Special Tools in connection with performance of that contract, and bears its share of overhead.

Production in Excess of Normal Capacity

Production in excess of normal capacity, if continued for any length of time, also brings attendant problems to the accountant.

If, under normal conditions, a plant is able to attain its capacity by operating one shift, additional cost is incurred by paying a premium

to employees to work a second or third shift. This changes their base rate for computing time and one-half or double time payments to those employees. If operating on standard cost, these rates will cause variations which must be recognized. Continued production in excess of normal capacity also requires a large influx of new employees which may require more tooling in order that maximum production may be attained in the minimum of time.

The problems arising from continued production in excess of normal capacity are many, but one item in particular is depreciation of equipment. The Commerce Clearing House recently published the following: "Normal and Abnormal Depreciation: Normal depreciation only is to be included in overhead expense. Depreciation in excess of the normal amount, which may be warranted in a particular case, will be shown separately with detailed explanation of the circumstances. Where plants are operating on two shifts, the depreciation rate may reasonably be 150 per cent of the normal rates for a single shift. Where the plant is operating on three shifts, the depreciation rate may be extended to 200 per cent of the normal rate." This appears to be a general statement of policy of rather broad application. The Treasury Department will have to be looked to for proper action on this matter. It is entirely possible that obsolescence rather than wear and tear is the reason why accelerated depreciation is not allowed for more than one-shift operations, on the theory that the additional wear can be repaired and the expense charged to the period in which the expense was incurred, and obsolescence cannot be established until an asset is actually retired.

Airplane manufacturers have inaugurated schools for training young men in specialized kinds of work and this expense becomes an added cost to the manufacturer for the supervision, tools, building rental, material, insurance, etc., to continue such schools, which are operated without tuition fees, usually off the premises, to train large numbers of new employees.

Other accounting problems may arise, in the case of large organizations, in connection with extraordinary travelling and moving expenses incident to transfer of employees from one plant to another. The automobile manufacturers, who are now building tanks or aircraft engines, have taken many of their employees to form a nucleus organization in their new undertaking, and in some cases the geographic locations of the plants are such that it is necessary to move employees, their families and homes, to another location, and un-

doubtedly they will be obligated to pay the cost of returning these employees to their original status, which will include paying transportation expenses for them, their families, their household goods, etc.

Plant rearrangement costs may be heavy. To cope with the present emergency our Government has created an agency known as the Defense Plant Corporation, which is a subsidiary of the Reconstruction Finance Corporation, to build and equip plants for the production of needed defense supplies. This is an item of cost which may have to be borne by the manufacturer at the end of the emergency, during a period of retrenchment when plants which have been operating far beyond any previous capacity have to be rearranged for purposes of normal, or even sub-normal, civilian-goods production. This may involve not only equipment changes within departments and single plants, but extend even to plant locations.

Billing the Government

Doing business with the Government brings to the contractor many new and special requirements not generally the rule in everyday commercial transactions. There is a far greater degree of rigid insistence that invoices show data which is meticulously correct and to the letter of the requirements laid down by the U. S. Comptroller General. Invoices are generally required to be submitted in anywhere from five to eight copies. They must carry a certification by an officer of the corporation submitting the invoice that the bill is correct, just, that payment has not been received, and that taxes have not been included. All reference data such as government contract number, dates, descriptions, unit prices, quantities, extensions, etc., must be letter and figure perfect.

These requirements are understandable. Government funds are to be disbursed and strict care and authority is requisite for the protection thereof, even to the extent of "too much red tape."

Cash discount procedure is different from the usual commercial practice. So far as the Government is concerned, dating starts only after the Government has accepted the goods, which means *after* inspection. Considerable time ordinarily elapses, therefore.

I could think of no better guide, or bible, on the subject of billing the Government than the advice embodied in the material given you as Exhibit 3. This resumé of pertinent points was prepared and presented by Mr. L. M. Nichols, of the General Electric Supply Cor-

poration, Bridgeport, Connecticut, at a recent Convention of the American Management Association at New York.

Inspection standards and requirements of the Government are very high. It is almost an essential that a manufacturer's inspection standards match those of the Government, as a high rate of rejects results in increased cost and loss to the manufacturer. Purchase orders for materials, parts, etc., should indicate not only the Government specifications, but also that they will be subject to government inspection, and where they are to be inspected, because inspection may be at the source or at the receiving point. Incidentally, copies of the purchase order should be given to government representatives (auditors and inspectors, for example) and unless these state that government inspection is called for it will not be done, thus resulting in delay.

The Nature of Government Contracts

Government purchasing may be put into two broad classes:

1. Normal civilian purchases.
2. Military and civilian defense purchases.

It is primarily with the latter type that we are concerned these days. Contracting agencies are many and widespread, but in general those associated with the latter class may be grouped under:

1. War Department Procurement.
2. Navy Department Procurement.

Probably it would be advisable to mention also a third group in view of the rapid expansion of productive capacity through R.F.C. financing. This group would include purchases under the Defense Plant Corporation.

Of two general types of contracts we will perhaps be concerned with supply contracts rather than construction contracts, as the latter chiefly cover public work projects. Contracts may then be classified as:

1. Fixed-price contracts.
2. Cost-plus-fixed-fee contracts.

An important distinction must be borne in mind that the latter is not the same as the old type cost-plus contracts which are now outlawed. As government contracting continues to expand, the cost-plus-fixed-fee contract is gaining wider use.

There is one important feature about government contracts in that they possess special elasticity. In private contracts the liberties for deviation from the stipulated covenants are ordinarily few; but the feature of flexibility, which is evidenced by a considerable number of special clauses—too many and too involved to discuss here—is present in government contracts. The use of such special clauses is justified by the fact that rapidity of performance on the part of the manufacturer is of the essence. If the manufacturer is to be encouraged to produce quickly and with speed, other restrictive factors usual to a contract must be shaped to yield to that end.

Just to mention a few kinds of special clauses, there are those pertaining to:

- a. Adjustments dealing with price (specifically, escalator provisions).
- b. Quantity and options.
- c. Changes—dealing with methods as to how a contract may be changed.
- d. Damage—dealing with damages and penalties for failure to perform in accordance with contract.
- e. Advance and partial payment.
- f. Special provisions.
- g. Termination.

In addition to special clauses, another form of contract modification to obtain flexibility is in the making of supplemental contracts.

This flexibility or elasticity, which is a characteristic of government contracts, may possess for the manufacturer disadvantages as well as advantages, and the contractor who bears this in mind will be well advised.

Financing Contracts

Financing for contracts may be arranged with the government agency making the contract. As a rule the supply contract will include a provision that advances up to 30 per cent of the total value of the contract may be made to the prime-contractor. The details of how, under what conditions, the security, the liquidation, etc., are generally embodied in a supplemental contract. As deliveries are made by the contractor, payments for them are made on the basis of the contract value less the amount of the actual money drawn as advances, i.e., if only 10 per cent of the contract value has been drawn in advances, deliveries are paid for on the basis of 90 per cent.

Partial (or progress) payments may also be arranged for in addition to advance payments. In some cases a prime-contractor may

draw the entire amount allowable as advance payment (30 per cent of contract value) but as yet make no deliveries, and need additional funds. Under arrangement for partial payment he can obtain the additional funds. However, provisions for partial payments should likewise be negotiated with the contracting officer at the time the supply contract is negotiated.

One interesting, and sometimes very troublesome, feature refers to the security required for the advance. The funds advanced may be placed in escrow. In one particular contract the security required was that advanced funds (in this case placed in escrow) had to be covered by either cash in the escrow fund, or actual inventory of work in process to be used for the supply contract being financed. In short, the advance had to be covered by an equivalent sum total in cash and inventory of work in process. Following, is a typical clause to illustrate this:

If the cost of all materials and inventory and work in process in the hands of the Contractor and Sub-Contractors to whom partial payments have been made, to the extent thereof, for delivery under the supplies contract, falls below the amount of unliquidated advances less the balance on deposit, the Contractor shall deposit out of payments made by the Government the amount of such difference . . .

and the following part of a clause referring to use of the funds advanced which is also of interest:

. . . partial payments, as hereinafter limited, to sub-contractors, not to aggregate more than dollars for:

- (a) Sub-contractors' engineering expense
- (b) Sub-contractors' tooling expense
- (c) Sub-contractors' materials
- (d) Sub-contractors' direct labor
- (e) Overhead at a rate not to exceed one hundred per cent (100%) of sub-contractors' direct labor and sub-contractors' tooling and engineering labor attributable to work done on the Supplies Contract.

The application for advance payments generally calls for:

- (a) Amount desired
- (b) Amount and character of supplies contract involved
- (c) Terms of liquidation of advance
- (d) Necessity for the advance
- (e) Security offered
- (f) Financial position, general character and responsibility of contractor requesting advance (certified financial statement not older than six months).

Sub-contractors and Sub-manufacturers

A firm may be a sub-manufacturer yet not a sub-contractor. It may be a prime-contractor on some orders, sub-contractor on others, and sub-manufacturer on still others. A sub-contractor becomes subject to statutes, regulations and orders which might not affect a sub-manufacturer. The fact that a firm may be manufacturing for and/or supplying a prime-contractor does not in itself make the firm a sub-contractor.

It is most important, therefore, that the status with respect to a particular order be discovered. A definition of "sub-contractor" is laid down on general terms in a promulgation by the U. S. Comptroller General (Vol. 18 Comp. Gen. 633-A-93931 Feb. 2, 1939) to wit:

A sub-contractor has been defined by the courts as one who enters into a contract express or implied, with a contractor, to perform part or all of the latter's contract. . . . If one performs in accordance with the specifications governing the original contract he is a sub-contractor; if not, he is merely a material-man.

Notwithstanding this promulgation, considerable caution must be exercised in drawing any conclusions as to sub-contractor status, for the term may be defined differently by the wording of certain contracts as well as various regulations and administrative interpretations.

Direct relations of both sub-manufacturer and sub-contractor are with the prime-contractor and not the Government. Sometimes these relations become quite complex and bring attendant accounting problems.

As supplies of various strategic materials are more and more becoming subject to restriction, sub-manufacturers and sub-contractors find difficulty increasing in greater proportion than do prime-contractors. I know of situations in which the only way a prime-contractor could obtain performance on contracts with sub-manufacturers was to procure the materials required and furnish them from his own stocks, or purchase them for direct delivery to the sub-manufacturer. The resulting accounting routine involved placing a purchase order with a materials supplier, instructing delivery to sub-manufacturer, paying materials supplier's invoice, and then in turn invoicing the sub-manufacturer.

Frequently, and probably generally, the price at which a prime-

contractor is able to obtain materials on behalf of a sub-contractor differs from that used by the latter in the price of the parts on the original purchase (between prime-contractor and sub-contractor). This results in the prime-contractor finding it necessary to (unwillingly) take a profit or absorb a loss on the materials, or else have the original purchase price for the parts (not the materials) revised. This has the characteristics of a merchandising operation which is not the essential business of the prime-contractor, yet into which he is forced by circumstance. And what is the proper accounting treatment of the profit or loss in relation to the supply contract with the Government?

Rework cost is another little thing to amuse the accountant. When parts received from sub-contractors do not meet inspection, they must be rejected. They might be sent back for replacement or they might be reworked in the prime-contractor's shop. This involves accounting problems. Rework cost might be higher than the sub-contractor will agree to absorb; therefore any difference becomes additional cost to the prime-contractor. Should this be treated as an overhead item, or as a direct charge to a contract? Offhand, it would appear proper as a direct charge, but suppose the part is a standard part usable on any contract? In the latter case there is no alternative but to consider it an overhead expense.

Prime-contractors may find it necessary to train employees of sub-contractors in the prime-contractor's shops; to station instructors, inspectors and other technicians in the sub-contractor's plant; to have men on the road co-ordinating activities of a number of sub-contractors on work farmed out. These all mean added costs. In my opinion, such costs are allowable as part of overhead.

Advances to Sub-contractors

As defense production expands, the volume of sub-contracting and the number of sub-contractors and suppliers are constantly increasing; the problem of financing becomes a real one for many sub-contractors.

Since a sub-contractor does not have a direct contract with the Government, he cannot obtain advances directly from the Government, but must obtain them from other sources, either from banks or from the prime-contractor.

In the case of bank financing, I don't believe that the procedure is too far different from usual commercial practice. An assignment agreement is made between the sub-contractor and the bank. The

prime-contractor becomes involved to the extent that he must agree to such assignment and make payments for deliveries (on his contract with sub-contractor) directly to the bank.

In the case of financing arrangements made directly between prime-contractor and sub-contractor, agreements depend upon attendant circumstances and negotiations between the two. The financing agreement becomes a part of the original purchase contract and includes provision for execution of performance and surety bonds by the sub-contractor for the protection of the prime-contractor. Exhibit 4 is an illustrative agreement.

The accountant for the prime-contractor takes on the added burden of determining the financial responsibility of the sub-contractor. He must look into credit rating, financial structure, and past record of performance on money obligations; he must decide on the extent of credit line to be recommended to management as safe to grant to the sub-contractor. He must set up some type of record control so that advances to the sub-contractor do not exceed the limits fixed. He must keep posted on the progress of the production contract so that, as it approaches completion, the advance in the hands of sub-contractor is proportionate. He must be satisfied, in his own mind at least, that the sub-contractor is not using the funds to produce other work. This may be difficult but it is one of the factors to consider.

Amortization

By now we all have a sort of passing acquaintance, at least, with this subject of amortization which has gained such prominence in the last twelve months, and is now incorporated in the Second Revenue Act of 1940. I want to speak about it to a limited extent because we have been hearing so much also of such things as Certificate of Necessity, Certificate of Non-Reimbursement and Certificate of Government Protection.

We might review, for purposes of providing background, a few of the events leading up to the passage of the amortization plan.

The necessity for plant expansion in this country to meet the production requirements demanded by the defense program during the present emergency was strongly felt by all, yet private capital, justifiably, could not see its way clear to embark upon such a program of expansion, lest they be left at the end of the emergency with excess, useless plant facilities. This was particularly true of industries subject to the profit limitations imposed by the Vinson-Trammel Act.

Complete government financing and ownership was suggested as a possible solution to this problem, and this type of financing is available, but the most desirable method from the standpoint of the Government, that of private expansion through private funds, still held no inducement to American industry. To provide such an inducement the Five-Year Amortization Plan was created. In brief, the inducement offered to industry under this plan is a tax saving, by allowing the amortization, over a five-year period and only for tax purposes, of the cost of all facilities financed by private funds.

In order to obtain the amortization privilege, it is necessary to prove to the satisfaction of the Defense Commission and the Secretary of War, or the Secretary of the Navy (depending upon which of the latter two departments are purchasing your products) :

- (a) That the facilities for which amortization is sought are necessary to meet the production requirements demanded in the interests of national defense under the present emergency.
- (b) That the equity of the Government in the facilities is adequately protected with reference to future use and disposition in all cases where the applicant is being reimbursed for the facilities, in whole or in part, through specific provision in the supplies contract or indirectly by the inclusion of excess depreciation charges in the cost structure upon which the sales price is determined. Obviously, if the cost of the facilities is thus returned to the applicant, the Government has an equity in such facilities to the extent of the reimbursement, and is entitled to protection.

A brief outline of the Amortization Plan may be given as follows :

- a. Period of amortization—60 months.
- b. Allowed to corporations only.
- c. Amortizable assets only those certified by Defense Commission, Secretary of War, or Secretary of the Navy to be necessary facilities (includes land)
- d. Beginning of amortization period is elective :
 1. The month following that in which facilities completed or acquired.
 2. The taxable year beginning after that in which completed or acquired.
 3. Election must be declared in the return for the taxable year in which deductions are commenced. Amortization may not be deducted unless the necessary certificates are in the hands of the taxpayer not later than the due date for filing the tax return on which amortization is claimed.
- e. Acceleration of amortization period is possible through presidential decree that the emergency period is ended.
- f. Certifications necessary :

1. Certificate of Necessity
 2. Certificate of Government Protection
 - or
 3. Certificate of Non-Reimbursement.
- g. Applications for Certification must be made within 60 days of acquisition or beginning of construction.

Three types of certificates have been provided to officially inform the Treasury Department, as well as the applicant, that the Secretary of War or the Secretary of the Navy, the Defense Commission and the Emergency Facilities Committee concur in the thought that all requirements for amortization have been met.

Certificate of Necessity

This certificate is issued after the applicant has furnished, through an "Application for a Certificate of Necessity," various facts and figures (Exhibit 5) pertinent to the establishment of the necessity for the facilities, and after the various government officers and agencies previously mentioned decide that the facilities *are* necessary in the interests of the emergency. If the applicant's contracts, covering the merchandise to be produced with the facilities, contain any medium through which facilities costs are recovered, a second certificate should be obtained, namely:

Certificate of Government Protection

This certificate can be obtained through application, but is issued only after the various government officers and agencies, through examination of the applicant's government contracts, have established to their satisfaction that the equity of the government is protected in such cases where the applicant is being reimbursed for the facilities, directly or indirectly, in whole or in part.

Certificate of Non-Reimbursement

In cases where the applicant's government supply contracts *do not* contain any provision for returning the cost of the facilities, either in whole or in part, directly or indirectly, the certificate of government protection may not be necessary. The necessity certificate itself is required to authorize amortization deductions for tax purposes. *However, this third type of certificate, the certificate of non-reimbursement, should be obtained as a protective measure.* It minimizes the possibility of the Commissioner of Internal Revenue contending that the amortization claimed by the taxpayer is not allowable due

to the fact that, in the Commissioner's opinion, the taxpayer's contracts with the Government *do* reimburse him for the facilities, and that a certificate of government protection should have been secured.

Inventories

When extensive sub-contracting or farming-out is engaged in on a basis where a prime-contractor provides materials or semi-finished parts, there may be considerable inventory in the hands of sub-contractors. In a great many cases, special tools also are shipped out to sub-contractors. The extensive scale on which this is practiced by some airplane manufacturers creates a large problem for them.

Theoretically, these assets (materials or parts, as well as tools) are in the nature of consigned items. Routine may be handled in various ways, of which one is to move the items to the sub-contractor on memo billing without value and keep merely a subsidiary record. The problem arises, however, at the end of a fiscal period, as to segregation of values on financial statement. Under the accounting doctrine or convention of proper disclosure of pertinent information, it appears necessary to set these items up under separate grouping. In order to do so, dollar-value information is required and that would necessitate the carrying of values on memo billings and related records. Of course, if this is negligible in relation to the total assets involved, expediency and practical procedure might not justify segregation. The accountant will be called upon to exercise considerable good judgment.

On what basis should inventories be valued—standard costs or actual costs? The general attitude of the Government is that standard costs are not acceptable and values must be adjusted to actual cost basis. If actual costs, under what method: (1) First-in, first-out? (2) Last-in, first-out? (3) Other? In my opinion, the Government generally will prefer first-in, first-out and with reluctance will accept the last-in method. I do not wish it construed from this statement, however, that the last-in method is not acceptable. Certainly, the Revenue Act included it as an acceptable method for use in certain circumstances under which the manufacturer must first qualify.

Cost Control

During the period of the depression industrial accountants have performed a wonderful job in developing their share of cost control methods and procedure. Surely, during the present times when pro-

duction activity is currently reaching heights which are tending to surpass all past records, and when the major objective of the nation as a whole is all-out production for defense, we must not forget cost control. It is just as important now as it ever was; perhaps even more so in the face of rising costs on all sides. We must keep before management the importance of retaining a firm grip on costs. If estimates for pricing are to be based on past performance resulting from good control of cost, relaxation of control will mean danger to profit margins, which will not only be narrow, but subject to higher taxes as well.

Aid to Management

The industrial accountant can be of greater aid to management than ever before. Rising material prices, increased labor demands coupled with shortage of skilled labor and inefficiency due to unskilled operators, shortages of supplies, changes in types of markets (normal consumer to national defense needs), increasing government control, rising tax burdens, and multitudinous other problems are harassing management. The more we accountants can relieve management, directly or indirectly, the higher we shall rise in the appreciation of management. The opportunity is open before us.

Conclusion

As was asserted in the opening statement of this dissertation, there is much more to be said than can be said within the time allotted. I have tried to touch upon some of the more pertinent phases affecting the role of the industrial accountant and his job in relation to defense contracts. The extent to which these phases have been developed may not be of very substantial value to you as guidance or as solutions to your individual problems, but if it has made you aware of some of the things to bear in mind in connection with accounting for defense contracts, I shall feel that your time has not been wasted.

CHAIRMAN RUSSELL: Thank you, Mr. Healey. That paper was most stimulating. I know both of these talks this morning have raised many points for thought, and have challenged your attention. This afternoon we will have an opportunity to discuss some of those questions at the round table discussions.

This meeting is now adjourned.

. . . The meeting adjourned at twelve o'clock . . .

EXHIBIT I.

November 8, 1932.

CHART OF ACCOUNTS FOR MANUFACTURERS
OF AIRPLANES FOR THE U. S. GOVERNMENT

1. At the instigation of the principal manufacturers of airplanes, a meeting was held for the purpose of establishing a uniform accounting system covering the manufacture of airplanes and the system hereinafter set forth was agreed upon.

2. The system provides for the following major classifications of accounts:

1. Assets
2. Liabilities
3. Sales
4. Cost of Sales
5. Engineering Development Expense
6. General, Sales and Service Expense
7. Miscellaneous Income
8. Miscellaneous Deductions
9. Factory Overhead Expense

Each major classification is divided into sub-classifications and major accounts. The system provides that the account number to be used (individual account) will always consist of four figures. The first figure represents the major classification; the first two figures the sub-classification; the first three figures the major account; and the four figures the individual account. If necessary the individual account may be further sub-divided by the use of suffixes 0-1, 0-2, 0-3, etc. The individual accounts will be set up by the manufacturer to suit his needs provided they conform to the major accounts. Changes desired in the classifications of major accounts will be submitted to the authorized Government representative for approval before being put into effect. This restriction is made to insure a generally uniform treatment of operating expenses by manufacturers.

The system provides that cost data will be available with the following sub-divisions:

(a) *Direct Materials*

Direct Materials will be confined to materials that actually enter into and become a part of the article being fabricated and will include purchased fabricated parts and purchased services such as, heat-treating, plating and the like. Material costs will include the purchase cost only and will not include transportation charges, except in the case of carload shipments.

(b) *Direct Labor*

Direct Labor will be confined to labor in the actual fabrication, assembly and test of the article.

(c) *Factory Overhead Expense*

Factory Overhead Expense will include expenses under Classification 9, Major Accounts 901 to 909.

(d) *Engineering Direct Labor*

Engineering Direct Labor will be confined to draftsmen and engineers preparing designs, drawings, bills of materials, stress analyses, weight and performance data, etc., for the articles under contract.

(e) *Engineering Overhead Expense*

Engineering Overhead Expense will be confined to expenses under Classification 9, Major Accounts 951 and 952.

(f) *Direct Expenses*

Direct Expenses will be confined to major items of expense that can be charged directly to a contract such as Royalties; Indemnity Bonds on Contracts; Crash Insurance on Contracts; travel expense that is clearly chargeable to an individual contract, incoming transportation on engines, propellers and instruments; prepaid transportation on sales; fly-away gasoline and oil furnished without extra charge, and the like.

(g) *Engineering Development Expense*

Engineering Development Expense will include expenses under Classification 5.

(h) *General, Sales and Service Expenses*

General, Sales and Service Expenses will include expenses under Classification 6.

Separate records will be maintained of the direct labor, direct materials and factory overhead expense for special tools charged to an individual contract.

3. The determination of direct labor costs as outlined above requires the establishment of a time-keeping system for factory employees and engineers and draftsmen of the engineering department. The determination of direct material costs necessitates the establishment of a stores requisition system as material costs will be calculated on the basis of actual consumption.

4. The system provides that the direct factory labor, direct material, factory overhead expense, engineering labor, engineering overhead expense and direct expenses, allocated to work orders during the accounting period, will be charged to the "Work in Progress" accounts under Major Accounts 107, 108 or 109 and that these accounts will be credited with the charges to cost of sales or the finished products account for the accounting period. The "Work in Progress" accounts and records will be maintained in sufficient detail so that the total direct factory labor and other information necessary for determining the percentages for the application of overhead expense to individual work orders or contracts will be readily available.

5. The manufacturer will so arrange his accounts that charges to his operating expense, which represent expenses of a parent company or other company in the group organization, will appear separately in his accounting records.

MASTER
CHART OF ACCOUNTS
AIRPLANE MANUFACTURERS

1—ASSETS

10—Current Assets	101 Cash	1011 and up
	102 Advances	1021 and up
	103 Notes Receivable	1031 and up
	104 Accounts Receivable	1041 and up
	105 Accrued Assets	1051 and up
	106 Consigned Stock	1061 and up
	107 Inventories	1071 and up
	108 Inventories	1081 and up
	109 Inventories	1091 and up
12—Investments	121 Marketable Securities	1211 and up
	122 Inter-Co. Investments	1221 and up
	129 Misc. Investments	1291 and up
13—Fixed Assets	131 Land	1311 and up
	132 Roads, Sidings, Wharves, etc.	1321 and up
	133 Buildings	1331 and up
	134 Factory Equipment	1341 and up
	135 Office Equipment	1351 and up
	136 Transportation Equipment	1361 and up
	137 Flying Equipment	1371 and up
	139 Miscellaneous Equipment	1391 and up
16—Idle Plants	161 Land	1611 and up
	162 Buildings	1621 and up
	163 Machinery and Equipment	1631 and up
17—Patent Rights	171 Patent Rights	1711 and up
19—Deferred Expenses	191 Prepaid Insurance	1911 and up
	192 Prepaid Taxes	1921 and up
	193 Traveling Advances	1931 and up
	194 Development Expenses	1941 and up
	198 Misc. Prepaid Expenses	1981 and up
	199 Misc. Deferred Expenses	1991 and up

2—LIABILITIES

20—Current Liabilities	201 Notes Payable (Short Term)	2011 and up
	202 Accounts Payable	2021 and up
	203 Deposits	2031 and up
	204 Dividends Payable	2041 and up
	205 Unclaimed Wages	2051 and up
	206 Accrued Liabilities	2061 and up
	209 Customer's Property in Company's Possession	2091 and up
22—Long Term Liabilities	220 Long Term Liabilities	2201 and up
23—Reserves for Depreciation (Operating Plants)	232 Roads, Sidings, Wharves, etc.	2321 and up
	233 Buildings	2331 and up
	234 Factory Equipment	2341 and up
	235 Office Equipment	2351 and up
	236 Transportation Equipment	2361 and up
	237 Flying Equipment	2371 and up
	239 Misc. Equipment	2391 and up

MASTER
CHART OF ACCOUNTS
AIRPLANE MANUFACTURERS

2—LIABILITIES (CONT'D.)

26—Reserve for Depreciation (Idle plants)	262 Buildings	2621 and up
	263 Machinery & Equipment	2631 and up
27—Other Reserves	271 Misc. Reserves	2711 and up
28—Capital and Surplus	281 Capital Stock	2811 and up
	282 Surplus	2821 and up

3—SALES

30—Sales	301 Airplanes	3011 and up
	302 Experimental	3021 and up
	303 Spare Parts and Accessories	3031 and up
	304 Service	3041 and up
	305 Miscellaneous	3051 and up

4—COST OF SALES

40 and 41—Cost of Sales	401 Airplanes	4011 and up
	402 Experimental	4021 and up
	403 Spare Parts & Accessories	4031 and up
	404 Service	4041 and up
	405 Miscellaneous	4051 and up
	406 Unabsorbed Overhead	4061 and up
	407 Variations from Standard Costs	4071 and up
	408 Spoiled Work	4081 and up
	409 Defective Material	4091 and up
	410 Inventory Adjustments	4101 and up
	411 Misc. Adjustments	4111 and up

Separate Accounts will be used for Army, Navy and Commercial Sales and Cost of Sales. Sub-Accounts 0-1, 0-2, 0-3, etc. will be used to designate Army, Navy and Commercial sales and cost of sales if the individual accounts are used for a further sub-division of the class of product. Accounts 407, 408 and 409 will be used when the cost of sales is determined from standard costs.

5—ENGINEERING DEVELOPMENT EXPENSE

50—Engineering Development Expense	501 Engineering Development Expense—Military	5011 and up
	502 Engineering Development Expense—Commercial	5021 and up

To these accounts will be charged engineering development costs other than projects involving experimental contracts with the U. S. Government or other customers of the manufacturer which anticipate payment for the project. When a manufacturer is paid for

experimental costs that have previously been charged to these accounts, then the accounts will be credited with an amount equal to the total of the payments and this amount charged to the cost of sales for the period in which the transaction occurs.

MASTER
CHART OF ACCOUNTS
AIRPLANE MANUFACTURERS

6—GENERAL, SALES AND SERVICE EXPENSE

60 and 61—General, Sales and Service Expense	601 Executive Salaries and Expenses	6011 and up
	602 Treasury & Accounting Salaries and Expense	6021 and up
	603 General Expense (General Office salaries and expense, office supplies, stationery, printing, repair and maintenance of office equipment, depreciation of office equipment, administrative travel expense, dues, donations, subscriptions to periodicals, telephone, telegraph, postage, legal and professional expense, patent expense, state taxes, corporate expense, etc.)	6031 and up
	610 Order Dept. Salaries and Expenses	6101 and up
	611 General Service Expense (Field Service Salaries, travel and expense)	6111 and up
	613 Commercial Sales Expense (Sales Salaries and commissions, travel expense, advertising, publicity and show expense, export expense, prepaid transportation on sales, Washington representative's salaries and expense, etc.)	6131 and up
	615 Military Sales Expense	6151 and up

7—MISCELLANEOUS INCOME

70—Miscellaneous Income	701 Miscellaneous Income (Interest earned, discounts on purchases, dividends, etc.)	7011 and up
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MASTER
CHART OF ACCOUNTS
AIRPLANE MANUFACTURERS

8—MISCELLANEOUS DEDUCTIONS

80—Miscellaneous Deductions	801 Miscellaneous Deductions (Interest paid, bad debts, discounts allowed, idle plant expense, loss on sale of capital assets, extraor- dinary expenses not chargeable to current op- erations, federal income tax, depreciation of pat- ents, etc.)	8011 and up
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9—FACTORY AND ENGINEERING OVERHEAD EXPENSE

90—Factory Overhead Expense	901 Salaries & Wages	9011 and up
	904 Supplies and Expenses	9041 and up
	906 Salaries and Wages, Maintenance	9061 and up
	907 Maintenance Expense	9071 and up
	908 Heat, Light and Power	9081 and up
	909 General Factory Expense (Depreciation, Freight and Express on materials, taxes, rents, insurance, etc.)	9091 and up
95—Engineering Overhead Expense	951 Salaries and Wages (Undistributed)	9511 and up
	952 Supplies and Expenses	9521 and up

Revised 10-31-32

EXHIBIT 2.

BRIEF OUTLINE OF COST DEFINITIONS
INDICATED IN T.D. 5000

(A) The general rule is that the cost of performing a contract or subcontract shall be the sum of—

1. The direct costs, including expenditures for materials, direct labor and direct expenses incurred by the contracting party in performing the contract or subcontract, and
2. Proper proportion of indirect costs (including therein a reasonable proportion of management expenses) incident to and necessary for the performance of the contract or subcontract.

(B) Determination of cost—includes

1. Manufacturing costs—sum of factory cost and other manufacturing costs.
2. Miscellaneous direct expenses.
3. General expenses—sum of indirect engineering expenses, expenses of distribution servicing and administration.
4. Guarantee expenses.

(C) Factory costs—the sum of the following :—

1. Direct materials.
2. Direct productive labor (shop labor).
3. Direct engineering labor—professional engineers, draftsmen.
4. Miscellaneous direct factory charges—royalties, etc.
5. Indirect factory expenses (factory overhead) which includes—
 - a. Labor—supervision, inspection, clerical, timekeepers, packing, etc.
 - b. Materials and supplies—shop fuel, lubricants, gauges, etc.
 - c. Service expenses—power, light, heat, ventilation, etc.
 - d. Fixed charges and obsolescence—fire and elevator insurance, taxes, depreciation, etc.
 - e. Miscellaneous indirect factory expenses—compensation insurance, Old Age, Social Security, accident compensation (but if self-insured then only to the extent of actual losses incurred), etc.

(D) Other manufacturing costs—amortization of cost of designs, purchased patent rights, experimental and development charges.

(E) Miscellaneous direct expenses—includes

1. Cost of installation and construction.
2. Sundry direct expenses—premiums on performance bonds, state sales taxes, crash insurance premiums paid, wind tunnel tests, etc.

(F) Indirect engineering expenses—(engineering overhead) includes

1. Labor consultants and departmental engineers.
2. Material—drafting paper, ink, etc.
3. Miscellaneous expenses—blue prints, drawing, etc.

(G) Expenses of distribution, servicing and administration—includes

1. Compensation for personal services of employees, executive and administrative officials and employees.

2. Bidding and general expenses, including expense of preparing and submitting bids.

3. General servicing expenses—adjustments, minor defects.

4. Other expenses—miscellaneous office and administrative expenses—stationery, office supplies, contributions to community organizations, etc.

(H) Guarantee expenses—correction of defects or deficiencies guaranteed—costs estimated subject to rebate or increased tax if expenses actually incurred are more or less than estimate.

(I) Unreasonable compensation—not allowable although regular reasonable bonuses to employees (not officials) allowable.

(J) Allocation of indirect costs—no general rule, but costs must relate to performance of contract.

METHODS OF ALLOCATION ORDINARILY ACCEPTED

1. *Factory Indirect Expenses* allocated on basis of proportion which direct productive labor on the contract bears to the total direct productive labor of the production department during the period of the performance of the contract.

2. *Engineering Indirect Expenses* allocated in the proportion which direct engineering labor on the contract bears to total direct engineering labor of the engineering department during the period of the performance of the contract.

3. *Administrative Expenses* (or overhead) allocated on the basis of the proportion which the sum of the manufacturing costs and cost of installation and construction on the contract bears to total manufacturing costs and total cost of installation and construction during period of performance.

4. Bidding, general service expenses, allocated on either of the two following bases—

1. Proportion which contract price bears to total sales during the period of performance, or—

2. Proportion which sum of manufacturing costs and costs of installation and construction on contract bears to sum of total manufacturing cost and total cost of installation and construction during period of performance.

EXHIBIT 3.

OUTLINE OF PERTINENT CONSIDERATION IN
REFERENCE TO BILLING THE GOVERNMENT
ON DEFENSE CONTRACTS

Not only is there a big financial problem involved in contracts let by the U. S. Government, but there is a technique in connection with handling all routine matters which must be strictly complied with to avoid serious complications and delays.

Contracts usually fall under one of the three classifications:

1. Contracts placed by a general contractor or group of general contractors.
2. Contracts placed by a sub-contractor.
3. Orders placed by the War Department, Navy Department, Treasury Procurement Division and other government agencies.

CAREFULLY DETERMINE:

1. To whom bills are to be rendered.
2. To whom shipments are to be made.
3. The project number and the order number.
4. The general name under which the job is to be known.
5. The name and title of the contracting officer.
6. Whose authority you are authorized to accept if changes or substitutions are made.
7. The number of copies of invoices and the specifications required.
8. The number of copies of delivery tickets or bills of lading required and whether or not they are to accompany shipment, or to be sent with invoice.
9. The exact agreement as to terms including the matter of discount.
10. The requirement as to delivery date.
11. Whether or not there is a penalty for failing to comply with delivery requirements.
12. The precise agreement as to payments. If these are to be made by a draft, secure the correct name and address of the bank.
13. On all emergency orders received by phone or in person, be sure to obtain an official order number and the name of the individual placing it. Seek information as to whom it is to be shipped

and billed. Insist upon a confirming order, and it is usually good policy to withhold billing until confirmation has been received so that all requirements can be properly followed.

14. If the nature of the material furnished is such that it is difficult to supply the exact quantity ordered, it is better to fill the order a little short than to deliver an excess quantity for it is almost impossible to receive recognition for the excess delivery.

15. All shipments made by others for you must be in your name as to bill of lading, etc.

16. Assemble all charges covering partial shipments and put the billing through at one time, as invoice will not be passed for payment until the order has been completed.

17. In correspondence always refer to the purchase order number and distribution code number.

18. Find out whether the prime contractor has been required under the Miller Act to provide a performance and a payment bond. If the contract is a cost-plus-fixed-fee contract, the chances are that the bond has been waived.

19. Try to learn also whether the general contractor has assigned his claims under the contract as now permitted under the Assignment of Public Claims Act. If such an assignment has been made or is contemplated, you may be interested in learning whether the assignment provides any protection for the contractor's creditors.

20. Find out whether the contract contains a provision enabling the government to make direct payments to subcontractors and material suppliers. If you encounter collection problems, this right of the government to make direct payments may be important to us.

(*Note:* This outline was prepared and presented before the American Management Association at a recent convention in New York, by Mr. L. M. Nichols of the General Electric Supply Corporation, Bridgeport, Conn.)

EXHIBIT 4.

SUBCONTRACTOR AGREEMENT

TERMS AND CONDITIONS ANNEXED TO AND MADE A PART OF ALL
PURCHASE ORDERS WITH

.....

Name of Subcontractor

Article 1—PRODUCTION INFORMATION

Vendor is to furnish XYZ Corp. with all available information regarding possible delays in production.

Article 2—TOOLS AND MATERIAL

(a) Special Tools

(1) *Ownership and Custody*

All tools which XYZ Corp. shall purchase from the vendor and/or all tools which XYZ Corp. shall furnish to the vendor shall be appropriately segregated and marked and, upon completion of this contract or upon its termination by whatever means, be held by the vendor as the property of XYZ Corp. pending further instructions from XYZ Corp. as to delivery or disposition thereof free of all charges against XYZ Corp. for such service and/or storage, and the vendor, upon instructions, shall ship the said tools to XYZ Corp. f.o.b. vendor's plant. Vendor further agrees to take appropriate care of all tools so held and to place no legal encumbrance of any kind upon any tool which is the property of XYZ Corp.

(2) *Identification and Record*

Vendor is to mark all tools with the part number of the part made and/or any other markings suggested by XYZ Corp. to aid in the identification of the tools when transferred to or returned to XYZ Corp.

(3) *Use of Tools*

All tools which shall be furnished the vendor under this contract shall be used exclusively in the production of articles and material for XYZ Corp. and shall be subjected

to no other use whatsoever except upon the express written permission and approval of XYZ Corp.

(4) *Tool Maintenance*

Vendor shall maintain all tools and fixtures furnished under this contract in first class condition.

(b) Material to be supplied by XYZ Corp.

When material to be used in performance of this contract is to be furnished to the vendor by XYZ Corp., the vendor shall submit to XYZ Corp. a list showing quantities of XYZ Corp. furnished material required.

(c) Material Storage by Vendor

The vendor agrees that all material which is the property of or invoiced to XYZ Corp. will be carried by the vendor as XYZ Corp. property appropriately segregated and marked, and will be properly stored by the vendor without additional charge pending further instructions as to the delivery or disposition thereof and upon instructions shall be then shipped f.o.b. vendor's plant.

Article 3—INSPECTION

Assemblies and sub-assemblies may be inspected by XYZ Corp. and the customer of XYZ Corp. as they may elect at vendor's in any quantities, but this shall not relieve the vendor of the obligation to make full and adequate inspection.

Article 4—WARRANTY

The vendor hereby agrees and warrants that the items, articles, supplies and/or materials to be furnished under this contract will be in full conformity with XYZ Corp. specifications, drawings or samples, using customary shop practices subject to XYZ Corp. and customer's inspection and approval, and the warranty shall remain in full force until final inspection and acceptance by XYZ Corp. and by the customer. The vendor further agrees to bear the cost of loss on reworking of any material rejected for failure to meet specifications.

Article 5—LABOR REQUIREMENTS—FEDERAL CONTRACT LAWS

This contract and the performance thereof are expressly subject to all applicable Federal laws and the vendor agrees to give all information, stipulations and compliances required by applicable laws and to require the giving of such information, stipulations and compliances by the vendor's subcontractors, if any.

Article 6—SUBCONTRACTS BY VENDOR

The vendor agrees to assume full responsibility as to quantity, quality and service of such material as shall be purchased and/or contracted for by the vendor herein named from other manufacturers or material-men, and the vendor further warrants such material will meet the inspection requirements of XYZ Corp. and the customer of XYZ Corp. The completed article as called for under this contract shall not be shopped out or subcontracted without approval of XYZ Corp. in writing.

Article 7—SECRECY

Contractor agrees to be responsible in matters within its control for the safeguarding of all secret, confidential or restricted matters that may be disclosed or that may be developed in connection with the work under this contract.

Article 8—TERMINATION OF CONTRACT BY XYZ CORP.

This contract is expressly made subject to the contract of XYZ Corp. with its customer and the vendor agrees that any change in such contract which makes it advisable or necessary that work be discontinued on this contract, will give XYZ Corp. the right to terminate this contract by a notice in writing to the vendor. However, the vendor is to receive in such event payments, to the extent that XYZ Corp. is compensated therefor by its customer, for material purchased and work in process and actual pending obligations plus profit.

Article 9—BOND

Vendor shall execute a Surety Bond which shall guarantee the fulfillment by the vendor of all the conditions and stipulations of this agreement, and which shall hold XYZ Corp. harmless from all mechanics liens or other liens, claims, suits and/or charges of

any nature whatsoever as may be filed or brought against XYZ Corp., provided that such liens, claims, suits and/or charges shall arise or result from the performance of this contract by the vendor. The amount of the bond to be furnished shall be determined as follows:

If the total amount of the contract is ten thousand dollars (\$10,000), or less, the amount of the bond shall be the full amount of the contract price.

If the total amount of the contract is in excess of ten thousand dollars (\$10,000), but not exceeding one hundred thousand dollars (\$100,000), the amount of the bond shall be 50 per cent of the contract price but not less than ten thousand dollars (\$10,000).

If the total amount of the contract is in excess of one hundred thousand dollars (\$100,000), the amount of the bond shall be 25 per cent of the contract price but not less than fifty thousand dollars (\$50,000).

Article 10—INSURANCE

Vendor shall save and hold XYZ Corp. harmless from all suits and claims for injuries to person (including fatality) and damages to property arising out of or in any manner relating to the performance of this contract and to that end the undersigned further agrees to furnish certificate showing workmen's compensation coverage and public liability insurance of \$25,000/\$50,000, which coverage and insurance, however, shall not relieve the vendor of the obligation to save XYZ Corp. harmless hereunder.

.....
 Vendor
 By

EXHIBIT 5.
APPENDIX A
CERTIFICATE OF NECESSITY

.....

(Name and address of applicant)

NATURE OF FACILITIES: Insert here a brief description of the facilities such as: Land, Buildings, and Equipment necessary to constitute a complete plant, or Land and Buildings with Equipment necessary to constitute an addition to an existing plant, or Machinery and Equipment only for an existing plant, whichever is applicable.

LOCATION: Address where facilities are located.

SUMMARY

	<i>Estimated Cost</i>
Schedule (a) Land	\$.....
Schedule (b) Buildings—permanent	\$.....
Schedule (c) Buildings—temporary	\$.....
Schedule (d) Standard Machine Tools	\$.....
Schedule (e) Special Machine Tools	\$.....
Schedule (f) Hand Tools and Manufacturing Aids.....	\$.....
Schedule (g) Furnaces	\$.....
Schedule (h) Other Facilities not included in above.....	\$.....
GRAND TOTAL	\$.....

Schedule (a)	<i>Estimated Cost</i>
LAND	

Date of Acquisition:

A legal *description in accordance with records of township or county in which land is located. Acreage required, location, and unit or total actual or estimated cost. A print or drawing should be furnished showing location of plot in relation to adjacent terrain features such as: Airports, Highways, Railroads, Power Lines, etc., with appropriate identifying designation of each. This will also include improvements such as leveling, grading, and drainage.....

\$.....

Total \$.....

* *Note A:* Description and identification numbers should be such that each facility and its parts may be readily identified both physically and on your books by agents of the Internal Revenue Bureau. In case of estimated facilities give description and numbers tentatively and final description and numbers may be furnished after facilities are completed.

Clarification Note:

The identification number referred to above is such number as is applied generally for the affixing of tags to equipment which identifies such equipment in the Plant Equipment Ledgers.

Schedule (b)

Estimated Cost

BUILDINGS—PERMANENT

(List each item with its cost and floor area separately)

Date of Start of Construction

*Description

This will include a full list of structures, with description of type of structure and floor area and actual or estimated cost of each *unit. This schedule also covers all installations of lights, power, wiring, water, plumbing, and sprinkler systems, etc., usually included in building costs and power lines, water lines, etc., outside of the building itself. Also included in this classification are paving of yards, runways, parking areas, etc. Fencing of property, and spur tracks or railroad extensions on property

\$.....

Architects Fees (not to exceed 4% of building cost) may also be included in this schedule.....

\$.....

Total \$.....

Schedule (c)

Estimated Cost

BUILDINGS—TEMPORARY

(List each item with its cost and floor area separately)

Date of Start of Construction

*Description

This will include a full list of structures, with description of type of structure and floor area and actual or estimated cost of each unit. This schedule also covers all installations of lights, power, wiring, water, plumbing, and sprinkler systems, etc., usually included in building costs and power lines, water lines, etc., outside of the building itself. Also included in this classification are paving of yards, runways, parking areas, etc. Fencing of property, and spur tracks or railroad extensions on property

\$.....

Architects Fees (not to exceed 4% of building cost) may also be included in this schedule.....

\$.....

Total \$.....

Schedule (d)

Estimated Cost

STANDARD MACHINE TOOLS (Itemized)

(These must be listed by Identification Number and may be grouped by types or departments.)

Acquisition Date

*Identification Number

Quantity

*Description

Standard machine tools, with all standard accessories and fixtures of a permanent nature. Sheet metal tools and equipment. Foundry equipment. Anodic and plating equipment. Welding equipment. Presses, drop hammers, and accessories, excluding dies. Wood-working machinery and equipment. All other standard machinery and equipment of a permanent nature necessary for production. Costs of transportation and installation of the above items may be included.....

\$.....

Total \$.....

Schedule (e) *Estimated Cost*

SPECIAL MACHINE TOOLS (Itemized)

(These must be listed by Identification Numbers and may be grouped by types or departments.)

Acquisition Date **Identification Number*

Quantity **Description*

All special machine tools not included in Schedule (d) above, laboratory and test equipment, etc.....

\$.....

Total \$.....

Schedule (f) *Estimated Cost*

HAND TOOLS AND MANUFACTURING AIDS (*Itemized)

Acquisition Date **Identification Number*

This will include hand tools, gages, jigs, fixtures, patterns, punches, dies, etc., the cost of which is *not* included in the supply contract price of the item or items produced for the Government or normally charged to plant overhead. Also included are portable tools such as electric and pneumatic drills, riveters, shears, paint guns, welding torches, etc.....

\$.....

Total \$.....

Schedule (g) *Estimated Cost*

FURNACES

Acquisition Date **Identification Number* **Description*

All permanent and temporary furnaces, with accessories such as stokers, blowers, etc.....

\$.....

Total \$.....

Schedule (h) *Estimated Cost*

OTHER FACILITIES NOT INCLUDED ABOVE (*Itemized)

Acquisition Date **Identification Number*

Mechanical building installations such as motors, compressors, pumps, hoists, cranes, conveyor systems, etc. Plant equipment such as work benches, lockers, stands, racks, bins, paint and welding booths, etc. Office, cafeteria, and first aid furniture and equipment. Fire protection equipment including engines, extinguishers, hoses, etc. Handling equipment such as tractors, trailers, etc. Automotive equipment of all types. Any other equipment not herein specified, the cost of which is *not* included in the supply contract price of the item or items produced for the Government or normally charged to plant overhead

\$.....

Total \$.....

GRAND TOTAL \$.....

SESSION IV
GROUP DISCUSSIONS

WEDNESDAY AFTERNOON, JUNE 25, 1941

DONALD M. RUSSELL, *Chairman*

ALLOWABLE COSTS IN GOVERNMENT CONTRACTS

ACCELERATED DEPRECIATION—COST AND TAX ASPECTS

PROBLEMS IN THE AMORTIZATION OF INVESTMENTS
IN PLANT AND EQUIPMENT

APPLICATION OF OVERHEAD IN PERIODS OF ABNORMAL ACTIVITY

GEORGE M. EBERT is a native of St. Louis, Missouri, where he is now located. He began his business career as Cost Accountant with the Monarch Metal Weatherstrip Co. of St. Louis, leaving the company in 1929 to become Accountant for the Wright Aeronautical Corp. From 1931 to 1932, he served as Assistant Treasurer of the Curtiss-Wright Airplane Company in St. Louis, and in 1932, assumed the duties of Treasurer of the company with plants located in Robertson, Mo., and Wichita, Kan. In 1936, with the dissolution of this company, he took over his present duties as Assistant Treasurer of the Curtiss-Wright Corp. and Controller of the St. Louis Airplane Division. Mr. Ebert has been active in the management of the St. Louis Chapter, having served as Treasurer from 1934 to 1937, and as Vice President during 1938 to 1939. During 1940 Mr. Ebert served as President.

WILLIAM BLACKIE was born in Glasgow, Scotland and received his early training there. Indentured as a Chartered Accountant's apprentice in 1924, he gained his Chartered Accountant certificate five years later. Coming to this country Mr. Blackie entered the employ of Price, Waterhouse & Co. in their Chicago office in 1930 and in 1939 joined his present company, the Caterpillar Tractor Co. as Controller, the position he now holds. Mr. Blackie was active in the formation of the Peoria Chapter last year, and has served as its President during the current year when the Chapter has established a record for first-year performance.

HARRY C. MCCLUSKEY was educated at Marquette University, Milwaukee, and is a Wisconsin C.P.A. For five years, from 1919 to 1924, he taught cost accounting at Columbia University. Later he spent some time with the Pacific Development Corp. in Shanghai, China, returning to New York to become Supervising Senior with Lybrand, Ross Bros. & Montgomery. Following a period as Controller of the York Safe & Lock Co. of York, Pa., Mr. McCluskey moved to Chicago to assume his present position as Treasurer of the Kellogg Switchboard & Supply Co. Mr. McCluskey is a Past President of the Chicago Chapter, a Past National Director and a member of the Spot Club. He is also a member of the American Institute of Accountants and of the Chicago Yacht Club, where he indulges in his principal hobby.

CHARLES C. JAMES was born in Illinois, near St. Louis, Missouri. His first practical experience was with the San Francisco Railroad as Assistant Superintendent of Construction on the line between St. Louis and Memphis. In 1909 he became a member of the original staff of examiners of railroad accounts for the Interstate Commerce Commission. Following this experience Mr. James served with a number of large organizations, including the Southern Pacific Railroad, the Merchants Shipbuilding Corp., Merritt-Chapman & Scott Corp., Cramp-Morris Industrials, Inc., and the Westinghouse Electric & Manufacturing Co. Since 1931 he has been associated as Consulting Accountant with Stevenson, Jordan & Harrison. For many years Mr. James has been active in N.A.C.A. affairs and has appeared often at annual conventions and chapter meetings in addition to his several contributions to the *N.A.C.A. Bulletin*.

ALLOWABLE COSTS IN GOVERNMENT CONTRACTS

Chairman: GEORGE M. EBERT

Controller, St. Louis Airplane Division,
Curtiss-Wright Corp., St. Louis, Mo.

CHAIRMAN EBERT: The discussion this afternoon is for the set purpose of having a free interchange of ideas and experiences on the problems that we have at this particular time. It is not for me to tell you everything about this subject, and I do not intend to do so. The way we all participate in the discussion will determine the amount of good each one of us receives from this meeting.

Our subject is "Allowable Costs in Government Contracts." All government contracts do not recognize the same elements of cost. However, under the present emergency most of the contracts which we will be handling will be handled under T. D. 5000. The statements of cost determination in T. D. 5000 read very clearly. However, it is after you get the contract and start to operate that you get these problems. For instance, instructions went out recently to the Army and Navy auditors that traveling expenses of executives were to be allowed up to \$10 per day, exclusive of transportation. What I mean by that is railroad fare. Other employees will be limited to \$6 per day. Those of us who have fixed-fee contracts will have our fixed fee reduced by the amount of any such expenses over and above the \$10 and \$6 allowance. However, under T. D. 5000, there is no mention made of any limit. All through T. D. 5000 the word "reasonable" is used. That is one of the things we have to contend with.

You have all received a list of questions which I prepared because they were particular problems that have come up in our experience and I thought it would be a good way to start the discussion. I would like to ask the first question and see what happens: Where like materials are purchased for several contracts, is the average price allowable or should specific-lot-per-contract price be used?

You may be buying a standard article. However, upon receipt of a government contract, you may place a purchase order for a specific

DISCUSSION OUTLINE:

ALLOWABLE COSTS IN GOVERNMENT CONTRACTS

1. **DIRECT COSTS—MATERIALS**
 - (a) Where like materials are purchased for several contracts, is the average price allowable or should specific-lot-per-contract price be used?
 - (b) Are tools, such as extrusion dies, purchased in connection with the purchase of materials and used on subsequent contracts, allowable on the first contract in total?
2. **TOOLS**
 - (a) Is total amount of money spent for special tools for a contract allowable cost to the contract when there is a possibility of using the tools on a subsequent order?
 - (b) How should special tool costs be allocated, where tools are made on one contract which is a fixed-price contract, but used on contracts which are cost-plus-fixed-fee?
3. **BOND EXPENSE AND INSURANCE**
 - (a) Is all bond and insurance expense part of cost?
4. **OTHER DIRECT EXPENSES SUCH AS TRAVELING, FIELD SERVICE EXPENSE**
 - (a) Are such expenses to be charged directly to a contract, or should they be carried in overhead?
5. **SCRAP AND SPOILAGE**
 - (a) Is this expense chargeable directly to the contract? If so, what becomes of salvage?
6. **INVENTORY LOSSES**
 - (a) Quite often material is purchased for a specific contract. It is placed in stores and then becomes obsolete. Should this be picked up as part of the contract?
7. **PREMIUM FOR OVERTIME WORK**
 - (a) Should this be charged directly to the contract or to overhead?
8. **OVERHEAD**
 - (a) Should overhead application be based on monthly rate or annual rate?
 - (b) Should it be based on direct labor or some other basis?
9. **VACATION PAY**
 - (a) Is vacation paid in cash in lieu of time off an allowable cost?
10. **RIGHTS-OF-WAY—ROADWAYS—ET CETERA**
 - (a) Is the cost of the construction and purchase of such items under facilities contracts an allowable cost?
11. **ESCALATOR CLAUSE**

How and when are additional costs covered in escalator agreements under Government contracts recovered?

quantity to take care of that particular contract. How should that be handled, particularly where the price for the last order is lower than your average price because of the volume purchased? Can anybody help us on that?

PRICING MATERIAL

HENRY AITKIN (*New York Chapter*): Are you referring to a cost-plus or a fixed-price contract?

CHAIRMAN EBERT: A cost-plus contract.

MR. AITKIN: Then it would have to be the actual cost price, in my opinion.

I. WAYNE KELLER (*Chief Accountant, Armstrong Cork Co., Lancaster, Pa.*): I don't know whether our practice is exactly what it should be or not, but we have been using the average price on these contracts. We haven't been endeavoring to segregate like materials used on several contracts as being purchased specifically for any one of several. We have been taking a running average price of the raw materials. However, we have been keeping material purchased for defense contracts segregated from material purchased for ordinary run of business.

CHAIRMAN EBERT: We have two entirely different answers to the same question. I would like to add here our experience in St. Louis, where we had cost-plus-fixed-fee and fixed-price contracts. We use the average price on the cost-plus-fixed-fee contract, but we have been asked to use the actual invoice price of the specific material allocated to that contract. From a practical standpoint, I don't see how it can be handled and we are now waiting for a ruling on that particular question.

GEORGE W. CONTANT (*Certified Public Accountant, Buffalo, N. Y.*): Wouldn't that depend largely on how you are actually operating? If you purchased material specifically for that contract, it would seem to me that you would be limited to the actual cost price, but if you hadn't made purchases for that specific contract, it would seem to me you would be entitled to use the average price.

CHAIRMAN EBERT: I agree with you on that. I want to add one other point. I have a copy here of excerpts from the instructions to the Air Corps auditors in connection with the cost-plus-fixed-fee contract. One item that is specifically stated in there is that original invoices must be attached in order to receive payment for the material. Now, if you use an average price, I don't know how you are going to give them copies of your invoice. As I say, that question is up right now. There has been no answer to it. It is one of those things we are going to have to settle.

MR. CONTANT: In that connection, how could you give them your invoice if you couldn't identify the material with the invoice, unless it had been purchased for that specific purpose and segregated?

CHAIRMAN EBERT: I don't know. They say you should do it and you have to do it. Perhaps Joe Healey can help us on that.

JOSEPH P. HEALEY (*Controller, Airplane Division—Buffalo Plant, Curtiss-Wright Corp., Buffalo, N. Y.*): We have in our plant the first method of pricing materials. Just recently the Resident Auditor at our Buffalo plant, on a fixed-fee contract, complained because in taking materials through our receiving reports, we indicated that those materials were purchased for a specific contract and used the invoice price on those materials, rather than the first-in, first-out method.

EDW. WM. KRUEGER (*Partner, Walton, Joplin, Langer & Co., Chicago, Ill.*): While we are on the subject of materials, I have a situation where a man has a cost-plus-fixed-fee contract and has had trouble buying materials and getting deliveries. The government finally said, "We will send you the items that you can't get." He is very much concerned about what the thing is going to look like when the government auditors check up as to the reasonableness of his fixed fee. He says, "Shall I leave that item out since the government is furnishing it, or should I report it on the books as part of that cost to justify my fixed fee?"

I am of the opinion he should make a memorandum entry indicating the cost of all materials going in, and then he will be the fair-haired boy. I would like some expression of opinion on that particular point.

CHAIRMAN EBERT: Does anyone care to answer?

MR. AITKIN: If it is like an item in the commodity market, the auditor will have a right to ask for further instructions as to whether to allow or disallow.

CHAIRMAN EBERT: In this particular case the government will furnish it at no cost. It comes as government-furnished equipment; is that correct, Mr. Krueger?

MR. KRUEGER: It is a cost-plus-fixed-fee and it is furnished to them free.

FREDERICK W. KILDUFF (*New York University, New York, N. Y.*): I would like to answer the question about actual material cost in the case of cost-plus-a-fixed-fee contracts. You might be interested to know that your government contract officer or the auditors have very little to say. It is up to the Comptroller General. If you are interested in what is required in cost-plus contracts so far as substantiating documentary evidence is concerned, you might refer to the Savage Case, 20 Comptroller General 664, recently published, which is most important with respect to material costs.

CHAIRMAN EBERT: That was issued in April, I believe.

MR. KILDUFF: Yes.

CHAIRMAN EBERT: Briefly, in this particular case exceptions were being taken to furnish the original signed payrolls and the original copies of the invoices marked "paid." Those particular items I remember very clearly. The decision by the Attorney General is that it is necessary to furnish those copies of invoices and in so far as the payroll signed list is concerned, it would be possible to have a certified copy that was unsigned. I believe that is correct.

CARL E. HESS (*Auditor, The Kawneer Co., Niles, Mich.*): Mr. Chairman, would the provision that the invoices must be furnished to the prime-contractor apply to a sub-contractor, or how will that be picked up by the government auditors?

CHAIRMAN EBERT: Would somebody like to answer the question? The question is: Do the regulations which apply to the prime-contractor on cost-plus-fixed-fee contracts also apply to the sub-contractors? And in this case we are talking about real sub-contractors. Is that right?

MR. HESS: Yes.

CHAIRMAN EBERT: Has anyone had any experience?

MR. AITKIN: I believe they do. It must be in conformity with the prime contract.

CHAIRMAN EBERT: The answer is that the sub-contractor must comply with all the rules and regulations that apply to the prime-contractor, provided the sub-contractor is not supplying material on a fixed price to the prime-contractor.

CASH DISCOUNTS

MR. AITKIN: It is my understanding that all materials have to be charged to the government at a net figure, that is to say, with cash discount deducted. Is that correct?

CHAIRMAN EBERT: That is true.

I might mention again the instructions that have gone out to the government auditors who will be auditing and passing on your cost-plus-fixed-fee contracts. These are to the effect that the discounts must be applied directly to each individual invoice together with any other rebates, so that when you furnish the invoice to be reimbursed from the government, it must be net, less all discounts, rebates, etc. That ties in with several other questions that are now hanging fire. In fact, I understand that Colonel Volandt has sent out a letter, in which he is requesting comments from the manufacturers regarding elimination of these items that we are talking about. He is trying to get all of the questions together to see if something can't be done to clear up this situation.

GEORGE R. DE LEARIE (*Treasurer, Westfield Mfg. Co., Westfield, Mass.*): In reference to the net amount of the bills, is it necessary to add the freight to each individual bill?

CHAIRMAN EBERT: That is covered in T. D. 5000.

MR. AITKIN: You have to identify the freight with the invoice, and you must deduct the discount whether you take it or not. You can't let it slip by. You will suffer, if you do.

JOHN F. CODY (*Vought-Sikorsky Division, United Aircraft, Stratford, Conn.*): How do you reconcile your explanation of discounts with the 1 per cent allowed by T. D. 5000? As I understood, it need not be deducted.

CHAIRMAN EBERT: I was hoping I could get away without answering any questions. I can't reconcile it.

The question is how do I reconcile my statement that the discounts and rebates must be applied directly to each invoice, with the statement in T. D. 5000 that you are allowed discounts up to 1 per cent. My answer is, I can't reconcile it. All I was doing was quoting instructions that have gone out to the auditors on procedure to be followed by them. It is an item that we are taking exception to because it is impractical.

MR. CODY: A copy of instructions I have seen in chart form noted that 1 per cent would be allowable.

MR. AITKIN: The government allows you to take up to 1 per cent as other income credits. Anything over and above that you have to apply to the cost of material.

MR. KILDUFF: I think I can reconcile that for the gentleman. T. D. 5000 was, as you know, related to the Vinson Act, now suspended under the Second Revenue Act of 1940. Contracting officers are using it as a basis for cost. However, it is subject to much interpretation by the Comptroller General.

CHAIRMAN EBERT: That is true, except that most of your contracts define cost as itemized in T. D. 5000, and the contracts themselves have been approved in most cases, I believe, by the Attorney General.

OVERRUNS OF MATERIAL

SIDNEY R. CATSIFF (*Supervisor of Costs, General Electric Co., Fort Wayne, Ind.*): On special materials where it is usually consid-

ered economical to order either raw materials on in-process parts in excess of the actual requirements of a particular requisition or order, there is always the probability that some of it will not be needed to replace spoilage. Has any line been drawn between what is considered an economical amount of overages which could be allowed in cost?

CHAIRMAN EBERT: Has anyone had any experience with overruns?

I would like to add one comment to that. In machining operations, as we all know, there necessarily must be a scrap allowance. Quite often none of the scrap allowance is used. However, I believe—in fact I know—you can collect for the scrap allowance you have included in your cost-plus-fixed-fee contract, provided you do not have another order that will use those parts.

MR. CATSIFF: Suppose, subsequent to closing out the cost of the given order—before you actually dispose of the overrun—you secure another order. Do you have to allow credit?

CHAIRMAN EBERT: I would prefer that someone else answer that question. Suppose you have an overrun that is not absorbed in your production on a particular contract but is charged to that contract. Subsequently, after receiving final payment, you secure another contract on which the overrun can be used. Must you go back and make a credit for that particular item?

MR. ATKIN: It seems to me that it is up to the government inspectors to know from the bill of material the amount of material required to produce a certain given quantity and to limit it to the amount so that there is no overcharge.

CHAIRMAN EBERT: Has anyone had that particular experience of having a great deal of overrun material which they picked up in their regular contracts?

JOSEPH T. O'CONNOR (*Controller, Control Instrument Co., Inc., Brooklyn, N. Y.*): We have an overrun on every job that goes through. The overrun is held in an inventory account, awaiting orders for spares. Then the cost of the overrun is charged to the orders for spares.

CHAIRMAN EBERT: Suppose you never receive orders for spares?

MR. O'CONNOR: That would be our hard luck. However, we have been fortunate in receiving orders for spare and replacement parts.

THOMAS DAVIS (*Treasurer, Republic Aviation Corp., Farmingdale, L. I.*): It seems to me if the government will pay you for overrun materials that are not actually used, that material then becomes government property and they have the right to do whatever they may see fit with it. I think it then falls into the same category as government furnished equipment or government furnished material, which is government property resting on the contractor's premises.

MR. AITKIN: The fundamentals underlying a cost-plus-fixed-fee contract makes the government the owner of all the property they pay for.

CHAIRMAN EBERT: That is true. Let us move on from material. I am sure that there are a lot of other items that we would like to discuss. We do not need to be confined to the order given in the outline. If you have a problem or a question, now is the time to ask it, and I believe we can get some good opinions.

TOOL COSTS

MR. HESS: I should like to have an expression on question 1(b).

CHAIRMAN EBERT: Item (b)—“Are tools, such as extrusion dies, purchased in connection with the purchase of materials and used on subsequent contracts, allowable on the first contract in total?” That particular question was included for its nuisance value. On a cost-plus-fixed-fee contract we have had one decision from the local auditor, that where such tools are purchased, even though you had no other contract at the time, it would be necessary when another contract is received, to go back and prorate those tool costs which were included in your first material costs, provided it was shown as a separate item. That, I say, is the interpretation of a resident auditor and is not conclusive. Does that help you?

WILLIAM C. WICHMAN (*Assistant Works Accountant, General Electric Co., Fort Wayne, Ind.*): I would like to ask on what basis of reason that decision was made. I mean, that doesn't make sense. Is the government interested in which contract shows the cost? They are going to pay for it anyhow; they have paid for the tools. You can't charge them for the tools again. Why not let their second contract benefit?

CHAIRMAN EBERT: Perhaps I should have stated that this ruling applies only where you have other than government contracts. The same resident auditor also said: "If the particular material is used only on government contracts and there is no question that it will ever be used on any other contracts, pick it up on the first contract."

DAVID HIMMELBLAU (*Head, Accounting Department, Northwestern University, Chicago, Ill.*): Has anybody dealt with the Public Buildings Administration system of Accounting? They seem to have some different ideas.

CHAIRMAN EBERT: Is anyone here familiar with the Public Buildings Administration? Are you referring now to emergency plant facilities and defense plant corporation facilities?

MR. HIMMELBLAU: Yes. They have different rules. I was wondering if anyone was familiar with them.

MARK S. MASSEL (*Bureau of Research & Statistics, O. P. M., Washington, D. C.*): May I make one point of clarification? The Public Buildings Administration constructs buildings of the residential type and government building projects. It has nothing whatever to do with the emergency plant facilities contract or with the defense plant corporation contract. It uses a separate type of contract and a separate set of rules. Emergency plant facilities contracts are audited by the Army and Navy auditors; the defense plant corporation contracts are audited by R. F. C. auditors; and public buildings administration contracts are audited by P. B. A. auditors.

CHAIRMAN EBERT: Well, we took care of that one very nicely. Perhaps someone has some experience in this connection. Do you have a particular question in regard to the Public Buildings Admin-

istration? Most of our questions, of course, are tied to T. D. 5000, which, as I mentioned in the beginning, applies particularly to supply contracts for the Army and Navy and not to construction. However, there are quite a number of us here who have had some actual experience with both the defense plant corporation type of contract for expansion of facilities, together with the emergency plant facilities contracts that are issued directly from the War Department, so it is not necessary to confine our question on allowable cost to supply contracts.

COSTS OF FACILITIES

ROGER M. WAKEMAN (*Cost Accountant, Bullard Co., Bridgeport, Conn.*): I would like to ask if, in an emergency plant facilities contract, the cost of engineering the new building and the planning of the equipment necessary to bring your production up to a certain level can be included in the cost of the emergency plant facilities contract?

W. L. HEWITT (*Works Accountant's Staff, General Electric Co., Schenectady, N. Y.*): We have had several cases where that came up and in every case it has been settled by allowing a fixed percentage of the contract price. That fixed percentage is to cover all the original study work that is necessary in determining the facilities needed and in accounting for them.

CHAIRMAN EBERT: Does somebody else have an answer to this that may be contrary to that statement? I believe it is generally conceded in the War Department and in the R. F. C. They have followed the practice of recognizing as costs such preliminary expense together with the expense necessary while the buildings are under construction. You said that the allowance was a fixed percentage, did you not?

MR. HEWITT: A fixed percentage of the total cost of facilities.

CHAIRMAN EBERT: Was it actual cost, not to exceed the fixed percentage?

MR. HEWITT: No, it was a fixed allowance.

HARRY BLUMENTHAL (*Cost Accountant, Wright Aeronautical Corp., Paterson, N. J.*): It is my impression that each contract with the Defense Plant Corporation is a contract within itself. Some will allow you service charges, which is the type of charge to which the gentlemen referred, and some will not allow that charge. It all depends on your contract, I believe. Every contract is different. We have two in our place and one carries certain items; the other one doesn't.

JAMES W. JONES (*Chief Bookkeeper, Glenn L. Martin Co., Baltimore, Md.*): I would like to make an observation with regard to the expenses of administration and engineering in connection with new buildings. We have been accumulating the traveling expenses of our executives and we are billing the government on the prescribed forms for those expenses. Apparently the government has approved and allowed such cost for executives of our company whose business it is to see that the company has sufficient productive facilities.

CHAIRMAN EBERT: Does that include officers? You said executives.

MR. JONES: That is what I meant by executives. In the case of extrusion dies some of the manufacturers will quote you a price on a quantity which includes the dies and other manufacturers will bill the cost of the die first and then bill the cost of material at a per pound price. If the government allows the cost of the dies to be charged to the first contract, that is reasonable because it is based on the quantity of units ordered. But how are they going to distinguish the cost of the dies in the case where you buy the material at a price which includes the cost of dies? Obviously, you are going to buy material for the same number of units.

CHAIRMAN EBERT: That is correct. If you will recall, I merely said that that was the opinion of the resident auditor who made the request that we prorate the cost of extrusion dies over two contracts, but there was no authority on it. The only reason I brought up the question at all was for its nuisance value.

MR. HEALEY: On the matter of salaries of executive officers of a corporation, I believe you will find there is a limitation of \$6,000 per annum.

MR. AITKIN: That applies to defense plants only, not the Army and Navy contracts.

SHERMAN M. CHANDLER (*Plant Accountant, Combustion Engineering Co., Inc., New York, N. Y.*): Just one more question with respect to tools. In a case where you have large presses with a considerable expenditure for tools, and are working on government contracts of the fixed-price type and also regular commercial contracts, what basis should be used to divide the tool charge between the government contract and the commercial contract? Would it be considered a fair basis to throw those tool expenditures into your overhead account and let the contracts bear their share of the cost as applied through the overhead burden rates?

MR. AITKIN: From my knowledge of the general practice I would say that most of the engine companies charge tool costs into overhead. I believe the question is being brought up in Washington whether tools that have a longer life than a year should be capitalized and amortized.

CHAIRMAN EBERT: I believe there is also a ruling that none of these tools can be picked up as direct charge against the contract. The cost must be taken through overhead or through regular amortization.

J. B. MARTIN (*Chief Cost Accountant, Mullins Mfg. Corp., Salem, Ohio*): What is the ruling in regard to the costs of installation and of foundations for equipment under a defense plant corporation contract? May they be included?

CHAIRMAN EBERT: The question is, does the installation cost become part of the cost of the equipment purchased under the defense plant corporation type of contract?

MR. DAVIS: We do not have a defense plant corporation contract, but we have an emergency plant facilities contract and the installation costs of machinery and equipment purchased on that contract were allowed as charges to the contract.

MR. HEALEY: We happen to be operating under a defense plant corporation contract or lease. The cost of installation is being accu-

mulated at one point, and will be spread on the basis of dollar value of the equipment to become a part of the cost of that equipment.

COST OF REHABILITATION

MR. WICHMAN: I would like to ask a question with respect to cost-plus-fixed-fee work. If you are doing civilian work and you rearrange your factory so that you can do cost-plus-fixed-fee work, will the government later on allow you a demobilization expense to put it back the way it was, in order that you may go on with civilian work? Isn't that part of the cost of government work?

CHAIRMAN EBERT: It is a perfectly logical question. There is no question but that it is part of your cost. I do know that extraordinary cost of rearranging your plant is allowable. There is no reason to believe that a shrinkage cost couldn't be allowable, but I don't know. I would suggest you send that to Colonel Vollandt.

MR. CODY: Under an emergency plant facilities contract you are allowed the cost of returning your plant to its original structure, that is, where there has been an addition to an existing plant. Perhaps the present question might fall in the same category, permitting an allowance for returning the plant to its original condition.

CHAIRMAN EBERT: You are referring to a supplies contract?

MR. WICHMAN: Yes, a supplies contract. It is not part of a facilities contract unless it happens to be so specified.

CHAIRMAN EBERT: Is this a hypothetical case?

MR. WICHMAN: Yes, but we are all going to have it, and lots of it. When this emergency is over, it won't be theoretical at all.

MR. HEALEY: I can't answer the question; but this morning I mentioned something about recognizing that problem. I doubt very much whether it would be allowed as an item of cost on supply contracts today. But you might use a reserve to safeguard against paying out to stockholders in the form of dividends money that you will need later, and at that time they may be recognized as items of cost if you still have a supplies contract.

MR. WICHMAN: Do you mean that you can make an accrual which the Treasury Department will recognize? How are you going to hold it out?

MR. HEALEY: I didn't say they would recognize it—merely that you could use the reserve for book purposes only.

CHAIRMAN EBERT: You didn't even want to infer there was a possibility of collecting that from the government in advance of spending it.

MR. CONTANT: I might say that in the last war, such charges were allowed when the plants were dismantled. The cost of putting them back into their original form were allowed as expense.

CHAIRMAN EBERT: Were we talking about a cost-plus-fixed-fee contract?

MR. WICHMAN: That is exactly what I mean.

CHAIRMAN EBERT: I think that should have been picked up when you started and when you terminated your contract.

MR. WICHMAN: As an accrual.

CHAIRMAN EBERT: Only your actual expenditure is all you can pick up.

MR. WICHMAN: We aren't going to make it until it is over.

CHAIRMAN EBERT: I said I can't answer your question.

OVERHEAD IN FACILITIES CONTRACTS

CARL H. GRASHOF (*Controller's Office, Eastman Kodak Co., Rochester, N. Y.*): In all of the emergency plant facilities contracts and facilities clauses in procurement contracts that we have had at first writing, there was always a little clause included which said that no overhead of any kind can be charged to the cost of the contract.

The way we got around it was by refusing to accept it in the first

form. We accepted revised contracts containing a provision that the overhead costs of our tool department and various construction departments might be on any labor expended by those departments. I wondered how anyone else here has tackled that?

CHAIRMAN EBERT: This is under what type of contract?

MR. GRASHOF: Both the emergency plant facilities and the Navy type of contract, where the facilities are included as a section of the main contract.

CHAIRMAN EBERT: Has this been allowed? Has it been paid for?

MR. GRASHOF: It is set forth right in the contract. The Government accepted the contract with it in there eventually; but on the first reading of every contract we ever considered before negotiations started, that phrase always appeared.

CHAIRMAN EBERT: In other words the final contract had a special clause in it, including overhead, which was different than any other contract that they had presented to you?

MR. GRASHOF: Yes.

MR. CODY: I would like to ask whether or not overhead was allowed on installation charges.

MR. GRASHOF: The clause we put in simply made provision that a certain rate of overhead should be allowed on any labor which we expended for the manufacture, construction or installation of the facility.

MR. O'CONNOR: Did you show the overhead as a separate item or include it with your labor figure?

MR. GRASHOF: As a separate item.

MAURICE H. BAITLER (*Office Manager, Perkins Machine & Gear Co., Springfield, Mass.*): In connection with the emergency plant facilities contracts, we have one where overhead was excluded

by the terms of the contract, but some of the facilities included tools which we made in the plant on which we applied toolroom burden. This overhead on tools was allowed by the government auditor.

CHAIRMAN EBERT: Let me say, however, that quite often provisions get into contracts which are contrary to public law, and if this is the case it will be thrown out ultimately even though they are in the contract. There are several rules to this effect. I came in contact with one such ruling recently.

PERIOD USED FOR OVERHEAD RATE

LEONARD E. ZASTROW (*Assistant Controller, Bucyrus-Erie Co., South Milwaukee, Wis.*): This morning Mr. Healey stated that overhead was being distributed on a direct-labor basis and on an annual basis. Is that correct?

MR. HEALEY: The percentage was arrived at over an annual period, although we have changed our percentage figures on occasion in mid-year.

MR. ZASTROW: I was very much interested in that because our experience has been very different. The resident auditor in our case, with the approval of his superior, forced us to take the actual overhead in the month in which the direct labor was performed and use that as a base for a percentage distribution over the contract.

CHAIRMAN EBERT: Was that a cost-plus-fixed-fee contract?

MR. ZASTROW: Yes.

MR. HEALEY: The government auditors compile for their own purposes an overhead accumulation which they use in preparing the analysis which they present to their chief auditor, but that is on fixed-fee and not cost-plus contracts.

CHAIRMAN EBERT: On a cost-plus-fixed-fee contract, I believe they will handle it either way, until such time as you get to the final accounting. Normally they reimburse you weekly or monthly. Overhead is picked up normally by the resident auditor at the actual

rate of overhead less those items which are disallowed or unaudited. I believe you will find that at the end of the contract they will recompute the overhead for the life of the contract. That is only my guess right now.

MR. HEALEY: One point of clarification: In the airplane business, whether you have a cost-plus-fixed-fee contract or fixed-price contract, they audit your books. That might help to clear up your point.

MR. WICHMAN: I would like to ask Mr. Healey whether the privilege of a governmental audit goes with a fixed-price contract.

MR. HEALEY: I don't recall the exact wording, but the contract states that a representative of any governmental agency has the right to look at our books.

CHAIRMAN EBERT: I can add one comment to that. There is a decision by the Attorney General's office that no contract can be entered into by the government that excludes an audit by the government. Whether or not your contract has a clause in it saying you are subject to audit, you are nevertheless subject to audit.

MR. AITKIN: It is my understanding that in airplane companies you have to figure the overhead for the entire period of the contract, even though you go back to the prior fiscal year.

CHAIRMAN EBERT: That is correct.

CONTRACTS CONTRARY TO FEDERAL LAW

EMORY A. AUSTIN (*General Auditor, Hammermill Paper Co., Erie, Pa.*): You made a statement, I believe, that the contract might be signed and still it might be found to be contrary to existing law. I assume this might hold even after you had received payment and the matter had been passed by the Comptroller General. When would you know, in your opinion, that the money was safe? It might even have been paid out to the stockholders in dividends.

CHAIRMAN EBERT: I don't know. I am no lawyer. In fact, even if I were a lawyer practicing in Washington, I wouldn't at-

tempt to answer your question. All I know is that there have been several rulings in past years where, through an error in contracts containing provisions contrary to the statutes of the United States, the contract has had to be changed.

MR. AUSTIN: Wouldn't there be a statute of limitations on that?

ALLEN W. MADDREN (*Editor, Research Institute of America, New York, N. Y.*): It is my understanding that the contract must be authorized by a specific or general act of appropriation, which is the first thing that has to be investigated. Any provision of the contract not expressly or impliedly authorized by the act is apt to be unauthorized and invalid. In addition to the appropriation, which may limit the contract, there are various other statutes which may have an effect on the contract, such as statutes, general in effect, specifically authorizing particular provisions or directing that certain things can't be done. Typical provisions may be found in labor legislation. If you put a clause in the contract which is contrary to any statute, it is unauthorized and a government official cannot bind the government to comply with it. For instance, the Comptroller General has held that a clause in a contract that the contractor shall comply with the provisions of the National Labor Relations Act is unauthorized and is not binding upon the contractor, because the National Labor Relations Act contains specific clauses for its own enforcement, and neither the appropriation under which the contract was made, nor any other statute directed that the contract should contain such a provision; also, a provision in a contract that a contractor should keep certain records and certain data, although meritorious, being intended to further a government project of a social nature beneficial to the people at large by providing necessary information, was held to be unauthorized and therefore invalid. It is essential, consequently, that in drawing up any contract with the Government, close attention be given to the Act of Appropriation and all other statutes pertaining to the contents of the contract.

DONALD M. RUSSELL (*Partner, Lybrand, Ross Bros. & Montgomery, Detroit, Mich.*): Mr. Massel made a statement yesterday that we could expect some tightening up of cost accounting definitions and regulations. I wonder whether he would care to say anything more about it. Is there to be a manual issued that will replace T. D.

5000, and if so, will industry have anything to say about the preparation of such a manual?

MR. MASSEL: All I can say at the present time in answer to your question is that the possibility of setting up uniform cost manuals has been under discussion. Thus far there has been no sign of what the outcome of the discussion will be. The problem involves the further question of whether to set up one general cost manual or whether to set up manuals for various industries.

DEPRECIATION ON DEFENSE FACILITIES

MR. KELLER: I think there is one very important point on these allowable costs which we certainly should discuss at this meeting, namely, facilities which are purchased specifically for defense work with company funds. Later bids are submitted to the government for materials which would be produced on such facilities. What are the allowable depreciation or amortization charges in that case? How much depreciation may you take into cost if you want to claim non-reimbursement? Is the rate 20 per cent, or is it a rate based on normal life?

CHAIRMAN EBERT: The question is: What rate of depreciation or amortization would be allowed under the supplies contract to a manufacturer who has gone out and erected facilities out of his own funds and has then entered into a contract to furnish supplies? I would like to ask you first, whether you mean from an income tax deduction standpoint or from the standpoint of reimbursement from the government?

MR. KELLER: Reimbursement from the government. What depreciation or amortization rate would you include in arriving at your contract price? Of course, from an amortization standpoint for income tax purposes, you can take advantage of the 60-month provision, if the facilities are covered by a certificate of necessity. But in arriving at your contract price, should you use the rate of depreciation which that equipment normally would have, or an accelerated rate, say 20 per cent, taking as cost the same rate that is used for tax purposes?

CHAIRMAN EBERT: Frankly, I think you have to decide yourself, whether you want the government to repay you for those facilities, whether or not you already have a contract, whether the expansion took place after a certain date, and whether your time allowance has expired. The advisability of taking normal rates or the speeded up rates is something that you have to determine for yourself.

MR. AUSTIN: In the interest of saving time, I would like to point out that this subject is being discussed in the Jade Room later in the afternoon in one of the other groups.

ESCALATOR CLAUSES

EDWARD P. GILLANE (*Works Accountant, Underwood Elliott Fisher Co., Hartford, Conn.*): I would like to hear an expression of opinion on how and when additional costs, covered in an escalator agreement under government contracts are recovered. I believe that is very important.

MR. ZASTROW: I would like to ask Mr. Gillane whether he means additional costs, which originate as a result of changes in specifications by the government.

MR. GILLANE: Due to anything; it might be an adjustment in wage rates. You have certain estimated costs on fixed-price contracts and you find you actually expended on prime factory costs more than the amount of money you originally estimated. Should you proceed with a contract and take a loss on it, or should you stop work and get advice from the government beforehand as to whether or not they will pay the additional costs?

MR. ZASTROW: I happen to know a supplier in our area who handled that situation by getting an amendment to the original contract from the government.

MR. GILLANE: Before he over-expanded?

MR. ZASTROW: Yes.

MR. AITKIN: Some contracts have a provision for price adjustment to a maximum of perhaps 25 per cent on material and labor, based on

certain indexes. In accounting for an increase in the material and labor costs on a fixed-price contract containing such a clause, I know of some places where they accrue the increased cost and make a billing every quarter. The government does not have to pay that. They wait until the end of the contract. Personally, I am of the opinion that payment for added costs should be confined to the proportion of the production that has been shipped and billed. It should not be made on the production still in inventory.

CHAIRMAN EBERT: Do you have a contract with an escalator clause in it?

MR. GILLANE: We are just planning on going into it now. That is why I would like to have an answer at this time.

MR. GRASHOF: We have several contracts with escalator clauses in them, the most common applying to labor. There is one pet form for an escalator clause that is recommended by the Navy Department in which you estimate your labor quota for each three-month period of your contract. You write into your contract that amount of labor and then you select an index. We use the Department of Labor index for durable goods industries. Then as that index moves, the labor quota that is set forth in the contract is adjusted. For example, if we said we were going to spend \$100,000 for labor in the first quarter of the year and the index went up 4 per cent for that period, we would merely send the government a bill for \$4,000 and they would pay it, whether we spent \$100,000 for labor or not. In fact, it is also stated in the contract that the liability of the government for the increased labor cost shall be fixed whether the money for the labor was actually spent or not. This is a very simple way of taking care of increased labor costs.

The material situation, however, is somewhat more involved in that you can seldom get a single index to tie your material cost to, at least we couldn't. We worked out a plan which is more or less satisfactory in which we merely froze the prices on which we based our quotation, and then if we pay more for our materials than those frozen prices, we get that much more for our finished product as we ship and bill it.

MR. GILLANE: Were you working at a predetermined fixed price per unit on that type of contract?

MR. GRASHOF: Yes.

CHAIRMAN EBERT: It is getting late. We have to bring this to a close. The escalator clauses are pretty well defined in a great number of contracts. All I would like to add is to suggest that you have the right escalator clause when you start. I don't believe that any of them are altogether right because they do not protect you for increased hours due to new personnel, but only for an increase in rates.

. . . The meeting adjourned at three-forty o'clock . . .

ACCELERATED DEPRECIATION—COST AND TAX ASPECTS

Chairman: WILLIAM BLACKIE

Controller, Caterpillar Tractor Co., Peoria, Ill.

CHAIRMAN BLACKIE: I would like to start our meeting by defining roughly the scope of our subject this afternoon. There has been some misunderstanding as to the extent to which the subject of accelerated depreciation might overlap the subject of amortization of capital investments being discussed at another meeting by Mr. Harry McCluskey; but we have worked out a reasonably good distinction between the two subjects and I am going to define the limits of our particular subject matter now so that those of you who think you are going to hear about amortization may move over to some other meeting.

A most apt definition of the subject of our discussion occurs in the N. A. C. A. research study published in the *Bulletin* of April 15, entitled "Practice in Accounting for Depreciation." As defined in the questionnaire which was the basis for that publication:

"By accelerated depreciation is meant a blanket increase in rates during a period of abnormal activity to take care of the additional wear and tear occasioned by more than normal usage of equipment. It should be distinguished from adjustments of rates resulting from a review of estimated remaining life as required by T. D. 4422."

There are three main aspects of depreciation—(1) valuation, (2) replacement or return of investment, and (3) exhaustion of useful life. We are concerned only with this latter aspect—the exhaustion of useful life, which is the deduction contemplated by our tax laws and regulations. If “exhaustion of useful life” is interpreted broadly enough it is also, to my mind, substantially equivalent to what may be considered the proper charge against operations over a given period.

As you all know, T. D. 4422 is the basis for the present income tax concepts of depreciation, and since no discussion of our subject could be complete without reference to the statutory or regulatory definitions resulting from that decision, I would like to remind you of these and a few other pertinent definitions which must be kept in mind if the income tax aspects of our subject are to be given the consideration they deserve.

Depreciation—“A reasonable allowance for the exhaustion, wear and tear of property used in the trade or business, including a reasonable allowance for obsolescence. . . .” (I. R. C., Sec. 23(L))

“A reasonable allowance for the exhaustion, wear and tear, and obsolescence of property used in the trade or business may be deducted from gross income. For convenience such an allowance will usually be referred to as depreciation, excluding from the term any idea of a mere reduction in market value not resulting from exhaustion, wear and tear, or obsolescence. The proper allowance for such depreciation of any property used in the trade or business is that amount which should be set aside for the taxable year in accordance with a reasonably consistent plan (*not necessarily at a uniform rate*) whereby the aggregate of the amounts so set aside, plus the salvage value, will, at the end of the useful life of the property in the business, equal the cost or other basis of the property determined in accordance with section 113. Due regard must also be given to expenditures for current upkeep. . . .” (Reg. 103: Sec. 19.23(L))

Method of computing depreciation allowance—“The capital sum to be recovered shall be charged off over the useful life of the property, either in equal annual installments or in accordance with any other recognized trade practice, such as an apportionment of the capital sum over units of production. Whatever plan or method of apportionment is adopted must be reasonable and must have due regard to operating conditions during the taxable period. The reasonableness of any claim for depreciation shall be determined upon the conditions known to exist at the end of the period for which the return is made. If the cost or other basis of the property has been recovered through depreciation or other allowances no further deduction for depreciation shall be allowed. The deduction

for depreciation in respect of any depreciable property for any taxable year shall be limited to such ratable amount as may reasonably be considered necessary to recover during the remaining useful life of the property the unrecovered cost or other basis. The burden of proof will rest upon the taxpayer to sustain the deduction claimed. Therefore, taxpayers must furnish full and complete information with respect to the cost or other basis of the assets in respect of which depreciation is claimed, their age, condition, and remaining useful life, the portion of their cost or other basis which has been recovered through depreciation allowances for prior taxable years, and such other information as the Commissioner may require in substantiation of the deduction claimed.

"A taxpayer is not permitted under the law to take advantage in later years of his prior failure to take any depreciation allowance or of his action in taking an allowance plainly inadequate under the known facts in prior years. . . ." (Reg. 103: Sec. 19.23 (L)-5)

Obsolescence—"With respect to physical property the whole or any portion of which is clearly shown by the taxpayer as being affected by economic conditions that will result in its being abandoned at a future date prior to the end of its normal useful life, so that depreciation deductions alone are insufficient to return the cost or other basis at the end of its economic term of usefulness, a reasonable deduction for obsolescence, in addition to depreciation, may be allowed in accordance with the facts obtaining with respect to each item of property concerning which a claim for obsolescence is made. No deduction for obsolescence will be permitted merely because, in the opinion of a taxpayer, the property may become obsolete at some later date. This allowance will be confined to such portion of the property on which obsolescence is definitely shown to be sustained and cannot be held applicable to an entire property unless all portions thereof are affected by the conditions to which obsolescence is found to be due." (Reg. 103: Sec. 19.23(L)-6)

Changes in accounting methods. ". . . A taxpayer who changes the method of accounting employed in keeping his books shall, before computing his income upon such new method for purposes of taxation, secure the consent of the Commissioner. For the purposes of this article, a change in the method of accounting employed in keeping books means any change in the accounting treatment of items of income or deductions. . . ."

"Application for permission to change the method of accounting employed and the basis upon which the return is made shall be filed within 90 days after the beginning of the taxable year to be covered by the return. . . ." (Reg. 103: Sec. 19.41-2)

From these excerpts it may be gathered, among other things, that there is no lack of support for, at least, the theory of accelerated depreciation as an element of cost or expense deductible from income

for income tax purposes. I have found, however, a definite shortage of available material as to how such a deduction can be sustained for tax purposes and, as I suspect our interest (for the next year or two) is going to lie primarily in the tax aspects of our subject, I think we might consider these aspects before turning to the costs problems.

Under the impetus of the tremendous defense effort now under way, production machinery, machine tools and other items of capital equipment are being used at an abnormally high rate of activity. (At this point, we might narrow the focus on our subject to eliminate items such as buildings, which are not recognizably affected by fluctuations in the volume of production.) Today, three-shift manufacturing schedules are common, "swing" shifts and four work crews are being introduced in hundreds of plants, and the utilization of production facilities for 160 or 168 hours a week is becoming more and more prevalent.

In the depreciation rates being used by most manufacturers it is certain that no such volume of activity was contemplated. Are depreciation provisions, therefore, to be increased to recognize the hastened exhaustion of useful life engendered by the increased tempo of wear and tear? If so, how are the increased provisions to be sustained as deductions for income tax purposes?

I am told that very few companies have, so far, substantiated claims for such deductions, and this is borne out by the N. A. C. A. research study in which companies using the straight-line basis for calculating depreciation were asked:

- "1. Has your volume recently increased sufficiently to justify consideration of accelerated depreciation?"
- "2. Have you increased your depreciation rates as a result?"
- "3. If increased, as an indication of the extent of the increase, what per cent over normal rates would you use for a 100 per cent increase in operations, i.e., a shift from a 40-hour week to an 80-hour week, or two shifts in place of one?"

"Of the 245 companies, 56 had experienced, at the time of answering the questionnaire, an increase in business sufficient to justify consideration of accelerated depreciation. Of the 56, eight had decided to accelerate their depreciation rates for certain types of assets, 24 reported that the subject was under consideration, and another 24 merely answered 'No' to question 2."

The attendance here today makes me think that conditions have changed considerably since the questionnaires were completed in De-

cember, 1940, and the prospects for the immediate future are that most manufacturing plants will be faced with either increased production justifying consideration of accelerated depreciation, or decreased production justifying consideration of decelerated depreciation. In a defense economy, with regulation and rationing taking the place of supply and demand, few, if any, manufacturing businesses can remain static.

Before throwing the meeting open to its real purpose—discussion—I believe I might clear away some confusion which, I have learned, has been prevalent in the minds of many taxpayers over what has appeared to them to be a seeming inconsistency in provisions of the already-quoted regulations: viz, "The reasonableness of any claim for depreciation shall be determined upon the conditions known to exist *at the end of the period* for which the return is made" (Reg. 103: Sec. 19.23 (L)-5) and "Application for permission to change the method of accounting employed and the basis upon which the return is made shall be filed *within 90 days after the beginning of the taxable year* to be covered by the return" (Reg. 103: Sec. 19.41-2). The solution may, however, be derived from the definition with which I opened the meeting. Accelerated depreciation is recognized as such for tax purposes by an increase in annual depreciation rates—which does not involve a change in method requiring the advance consent of the Commissioner and may be undertaken in the light of the conditions prevailing at the end of the year. Change from, say, a straight-line basis of depreciation to a productive-activity basis is, however, a change in method for which permission must be requested within 90 days of the beginning of the year in which the new basis is to be used. It is now, therefore, too late to make any such change in method for the calendar year 1941; but, as this discussion develops, I think it will become apparent that the confusion arose not because taxpayers contemplated or desired a change in method, but because they thought in terms of productive activity as a means of justifying blanket increases in annual rates.

Those of you who struggled with, or who have happened to study, the problem of accelerated depreciation in the period of abnormal activity stimulated by the last world war, may recall the arguments put forth on the effects of multiple shifts and overtime—the dilution of skilled labor in expansion of the working force, reduced efficiency during night work, divided responsibility for machine care over more than one shift, over-loading and over-speeding of machinery, inade-

quate shut-down of machinery for repairs and maintenance, etc. Since that time, however, an altered tax concept of depreciation has been promulgated in T. D. 4422, in which it is declared not only that "Whatever plan or method of apportionment is adopted must be reasonable and must have due regard to operating conditions *during the taxable period*," but also that "The reasonableness of any claim for depreciation shall be determined upon the conditions *known to exist at the end of the period* for which the return is made," and "The deduction for depreciation in respect of any depreciable property for any taxable year shall be limited to such ratable amount as may reasonably be considered necessary to recover *during the remaining useful life* of the property the unrecovered cost or other basis."

The decision contemplates that the charge against income shall be measured by determination of the condition (1) existing during the year, (2) existing at the end of the year, and (3) likely to exist in future years as determined by appraisal of the causes affecting, or likely to affect, "the remaining useful life of the property." From the nature of his functional specialization, the accountant, believing that reasonably ascertainable causes provide a sound basis for estimating probable future effects, will be likely to give most weight to the first of these factors, whereas the two latter factors will undoubtedly find major favor with the appraisers and engineers. I think you will also find the Appraisal Section of the Internal Revenue Bureau disposed to attach more significance to future remaining useful life than to past exhaustion, but, as noted from the treasury decision, there is ample support for the general historical accounting approach to the determination of "reasonableness"—analysis of demonstrated past results and corollary inference as to the probable future.

With these preliminary remarks, let us turn to discussion of the ways and means by which the extent of accelerated depreciation may be measured and, if possible, sustained as a deduction for income tax purposes.

In order to determine what effect, if any, plant activity has on the useful life of manufacturing facilities, a study of the behavior of each item of importance in the plant account under varying conditions will, undoubtedly, be required by the Internal Revenue Bureau. The Bureau will probably request (1) a detailed explanation of the method you propose to use in arriving at the computation of depreciation, and (2) the information indicated by the following summary:

1. Principal types of machinery.
2. Number of machines of same type or model.
3. Cost, by items.
4. Age, dates of installation, and, if new, when acquired.
5. Function, use and operation of each principal type of machine.
6. Wearing parts, enumerate, as follows:
 - (a) Wearing parts replaceable and how accounted for on books, that is:
 - (1) Expense through repair and maintenance charges.
 - (2) Capital items credited to plant and charged to the depreciation reserve.
7. Historical record of retirements, showing:
 - (a) Date of installation.
 - (b) Date of retirement.
 - (c) Cause of retirement.
8. Classify items as follows:
 - (1) Those items the lives of which are not affected by use. Percentage of dollar value.
 - (2) Items having wearing parts which are maintained in good operating condition by replacement of minor parts through current yearly expenses and on which use is a minor factor as affecting total useful life. Percentage of dollar value.
9. Percentage of dollar value retired for obsolescence.
10. Percentage of dollar value retired on account of wear and tear, after elimination of items defined under paragraphs 8 and 9.
11. Average age of retirements on account of obsolescence.
12. Average age of retirements on account of wear and tear.
13. Normal production. How estimated.
14. Estimated decreased life for items comprised under paragraph 10, on account of accelerated production. How determined.
15. Fully depreciated assets in the plant account still in use.

Among the more interesting features of the information requested are (1) the distinction to be drawn between assets retired for obsolescence and those retired for wear and tear, and (2) the apparent acceptance of a conclusion that, at the actual point of retirement, assets are retired because they are *either* obsolete *or* worn out. Many accountants appear, however, to conceive of a depreciation rate as one covering, at the same time, both obsolescence *and* wear and tear; and they may perhaps find some support in the afore-quoted statutory definition of depreciation as "A reasonable allowance for the exhaustion, wear and tear of property used in the trade or business, *including* a reasonable allowance for obsolescence," or in the tax regulations, which prescribe that: "A reasonable allowance for the exhaus-

tion, wear and tear, *and* obsolescence of property used in the trade or business may be deducted from gross income." We might, therefore, start our discussion with a clarification of just what the depreciation rate covers when an asset is subject to both obsolescence and wear and tear.

DEPRECIATION AND/OR OBSOLESCENCE

JAMES A. SHANAHAN (*Public Accountant, Manchester, N. H.*): It seems to me that the depreciation rate should cover both obsolescence and physical depreciation. It is my feeling that the rate you take should be based on either the physical life or the economic life of the asset. In other words, a machine may have a life of thirty years physically, but in the normal progress of the inventive art industry it may become obsolete in twenty years. Therefore, you take the greater rate, or 5 per cent. That is my conception of the rate that is acceptable.

CHAIRMAN BLACKIE: Isn't it a fact, however, that accountants have talked and written at length to the effect that a depreciation rate may include provision for both wear and tear and obsolescence? There have been some recent writings to the effect that we should have the reserve for depreciation broken down into component parts: (1) a reserve for wear and tear, and (2) a reserve for obsolescence.

PAUL D. SEGHERS (*Tax Consultant and Accountant, Barrow, Wade, Guthrie & Co., New York, N. Y.*): I don't see how any depreciation rate can take into consideration a life greater than the lower of the two lives. What I mean to say is this, that if you estimate that in the normal progress of the inventive art you will replace your machine on the basis of a ten-year life, the fact that it might have a twenty-year physical life would have no bearing; if ten years is your estimate for obsolescence, it inevitably absorbs and eats up the physical life. It doesn't seem that you can take obsolescence on a ten-year life and physical depreciation over twenty years, because if it is going to be thrown out at the end of ten years, the physical life doesn't have any bearing on the case. I think that they usually expect you to give some weight to both factors. Any prediction of obsolescence can only be a prediction, and that is where I think the first conflict arises between the regulations and the law.

The regulations speak of proof of sustained obsolescence: That is

bad English, to start with, because obsolescence is growing old. Obsolescence is an event that has occurred or is known to occur. I think there is your first difficulty in reconciling the Bureau's attitude with the law.

The law speaks of reasonableness and does not refer to a deduction for obsolescence or even for obsolescence in addition to physical depreciation, but speaks of the lesser, including an allowance for obsolescence, so that the law must mean whichever life is the shorter.

One illustration I like to give in arguing depreciation—depreciation is largely argument anyway, despite what the engineers think—is a roof on a building. If you add a roof to a building, and the character and the nature of the roof is such that it will have to be replaced once more before the building is gone, that is the estimated useful life. If, on the other hand, you put on such a good roof that it would normally last ten years longer than the expected life of the building, you don't expect the roof to sit up there after the building is gone. Therefore your depreciation rate contemplates the roof going out with the building. That is true, but it isn't always taken into consideration in the case of building additions. Even small buildings adjoining a main building may be better built than the main building and have a greater normal life expectancy. Yet if you expect, because of the arrangement of the main building, that you are going to rip it out as soon as you can afford to, your physical life isn't the guide, and your depreciations of these additions should be tied to your main building. So I think taking the lower of the two life expectancies must be the accountant's concept as well. The accountant arrives at an estimate by considering both factors and weighing them. One is an estimate and the other can be quite accurately engineered. The physical life can be quite accurately estimated.

This was a comment rather than a question, but you asked for comments.

CHAIRMAN BLACKIE: I know you have given this matter considerable study, and I am glad to have you refer to it here.

I raised this matter of obsolescence early in the discussion so that we could perhaps eliminate it from further consideration. As we noted, the information requested by the Bureau included a distinction between items retired because of obsolescence and items retired because of wear and tear. The basis indicated by Mr. Seghers seems to me to offer a possible means whereby distinction can be made be-

tween assets in the course of being depreciated. For assets already retired, there would appear to be no alternative to an investigation or review of the reasons for the retirement action. Assets depreciated during their life for wear and tear may, nevertheless, be retired for obsolescence, and vice versa. Heavy presses may last perhaps fifty years if they are kept in good condition, and obviously physical life is not the predominant factor in their depreciation rate. On the other hand, wear and tear must be the prime factor in establishing the rate for depreciation of high-speed machine tools which, having a relatively short life, are not exposed to the same risk of obsolescence or change in the art. Nevertheless, presses are frequently retired for wear and tear and high-speed machine tools are often retired for obsolescence.

REPAIRS AND DEPRECIATION

A. F. NORTH (*Controller, Allen Bradley Co., Milwaukee, Wis.*): Don't you think that the possibility of repairing an item has something to do with whether obsolescence or depreciation should be taken? In the case of heavy presses or lathes, they can be kept in operation indefinitely by relatively simple repairs, such as replacing their bearings, etc. In the case of items like typewriters where there are numerous small parts, subject to wear, it is not worth while to replace too many of these parts, and eventually the whole piece of apparatus is discarded. In this case, the physical life of the machine should determine the depreciation rate, whereas in the case of heavy machinery the obsolescence charge should be based on the time when the machine can no longer be used economically.

CHAIRMAN BLACKIE: That point is well taken, and it is apparently recognized by the Bureau when it asks for information as to the "wearing parts replaceable" in Item 6 of the questionnaire.

The Bureau also raises a question as to the effect of repairs and maintenance—upon which there can be and often are two diametrically opposed arguments. The taxpayer will generally advance the argument that, under the pressure of urgent demand for production, repairs and maintenance have not been kept up to the extent which they should. The Bureau will probably counter-argue that accelerated depreciation is invariably retarded by accelerated repair and maintenance. In theory, at least, settlement of the problem should

be obvious from the facts of the case, but I wonder if anyone here has had any practical experience on the point.

MR. SEGHERS: I have had one large case involving accelerated depreciation and was successful for years. I now have the case pending since an engineer came into the picture.

The suggestion was raised, although in discussion no specific weight was given to it, that the over-all charge for depreciation and repairs should have some relation, and that if the amount of your repairs increases greatly, that should serve as a check on the amount of your depreciation, and, vice versa, if your repairs go down in a period of heavy production, it could be argued that they obviously went down because of inability to carry on normal repair work. In the case of a fairly uniform manufacturing process, those arguments can be built up right from the accounts.

I have a question for the engineer now—it hasn't gone to the technical staff yet—with respect to obsolescence which we claim and which we base roughly on increased volume. This case involves heavy machinery. We went on a three-shift basis and worked every day in the year except the few holidays. We claim that this greatly speeded up the normal rate of depreciation. We took a low rate during the years of low activity, and the Bureau hitherto has been willing to accept our theory. This is in effect a sort of mixed straight-line and unit-of-production basis—not specifically such, but roughly related to the volume of production.

The engineers brought up the point that heavy machinery of that sort has an almost unlimited useful life (which I don't agree to), and that repairs give it an almost unlimited physical life. The argument most difficult to answer in this case is that the depreciation rate really reflects obsolescence rather than physical wear, and therefore increased production with resultant increased physical wear, still doesn't shorten the estimated total life.

In other words, if it has a forty-year physical life and you are using a normal rate based on a twenty-year expected useful life because of obsolescence, double use (shortening its physical life, admittedly cutting its physical life in half) would only bring it down to twenty years anyway and therefore you should get no accelerated depreciation.

My answer, supported by actual experience, is that since the volume of production, when it goes up, justifies putting in new and

better machinery, while in periods of low production the old machinery is allowed to stay there without any additions or any replacements, the mere fact of having overtime operation for several years in succession does bring very much closer the date when the old machines will be replaced. Therefore, overtime operation accelerates not only physical wear, which is admitted, but also accelerates obsolescence because it accelerates the probability of bringing in larger, more efficient units. That is a fact. It can be shown by a study of the operating units, that as the production goes up, machines that were perfectly satisfactory with a lower production are thrown out and replaced for two reasons: first, the company can afford it, and, second, with a larger production, the economy of having more efficient machines, larger machines, machines turning out a greater volume of product in a shorter time, fully justifies the investment.

Returning to the question of repairs, in the case referred to repairs were tied up only as to amount in the comparison between annual depreciation, the repairs, and sometimes the net depreciated cost of the plant at several different depreciation rates. The visualization of these figures, indicating the trend, has a very convincing effect in depreciation conferences.

CHAIRMAN BLACKIE: Regarding repairs and maintenance—are the charges dealt with on a unit basis or as a composite total?

MR. SEGHERS: I was thinking specifically of a case where the product was a very simple one, a bulk product, and therefore a simple comparison of total machine repairs was sufficient to indicate the trend; in other words, if the volume of production went up sharply, repairs went down. The argument found support, that the repairs going down simply indicated that the almost continuous operation of the plant made it impossible to carry on the repairs. Therefore, the lower repairs showed we were entitled to more depreciation. On the other hand, if, after two or three years, we show very heavy repairs, the Bureau is likely to seize on that fact, and in reality has seized on it in one case, to advance the argument that the machines are being put back into condition and therefore restored and given a longer useful life. But I am not sure that I know what you mean when you speak of units.

CHAIRMAN BLACKIE: I mean unit of machinery, unit of equipment.

MR. SEGHERS: In this case it was considered in total. If there had been a more complex product—machines or machinery of some kind—I would have had to work it out by departments, but I didn't in this case.

CHAIRMAN BLACKIE: You touched on an interesting point in this matter of obsolescence. Is it purely a time element, accruing evenly, or does it sometime gallop? The Internal Revenue Bureau will, I believe, contend that obsolescence is not affected by the peaks and valleys of industrial production, but I wonder if a definite relationship does not exist between the introduction (if not also the invention) of improved equipment and the fluctuations in demand for the manufactured products. The tremendous drive for increased production today has undoubtedly accelerated research in the matter of speeding up output and a comparatively recent illustration of what I have in mind occurs to me in the machine-tool field. The demand for higher speeds and feeds accelerated the demand for improved cutting tools, and high-speed steels gave way to tungsten carbide in these tools. The benefits available from the use of tungsten carbide led, in turn, to increased demand for still higher speeds and feeds on the machines, and today the obsolescence of many older machine tools appears to have been accelerated by reason of the fact that they cannot be speeded up sufficiently to take full advantage of the improved cutting tools. The accelerated desire or need for increased output was the incentive for an acceleration of effort to find something which would do the job better, and I believe that is what Mr. Seghers had in mind when he mentioned the fact that, at times such as the present, we do have an acceleration of obsolescence.

As I understand the Internal Revenue Bureau's attitude on this point, a claim for obsolescence of the type mentioned would probably be recognized if it were accompanied by the taxpayer's commitment that replacement of the superseded machines was contemplated at some reasonably definite future date.

SEPARATE RESERVE FOR OBSOLESCENCE

HARRY C. MCCLUSKEY (*Treasurer, Kellogg Switchboard & Supply Co., Chicago, Ill.*): I should like to have you ask this group how many set up separate reserves for obsolescence on the books.

CHAIRMAN BLACKIE: Can we have a show of hands as to how many provide reserves for obsolescence? (Only two raised their hands.) Would either or both of you gentlemen care to give us some of the reasons which prompted you to take this apparently unusual action?

WILLIAM M. TRANT (*Secretary & Treasurer, Holly Sugar Corp., Colorado Springs, Colo.*): Our action was based on a realization that some of our assets were overvalued because of excess facilities and other reasons. We were unable to apply the writedown as a tax deduction, so we set up an obsolescence reserve without making any deduction for tax purposes.

CHAIRMAN BLACKIE: There we have a recognition in accounting of a probable loss apparently not yet recognized for tax purposes—or perhaps not yet claimed in such a way that it could be sustained.

Mr. Seghers, have you had any success in matters of this kind?

MR. SEGHERS: As I said, we got 50 per cent for one year over the normal and 60 per cent for two other years. We went after 75 per cent, but were satisfied with 60 per cent. In other words, we are getting 160 per cent of the normal depreciation rate.

I think that if by "overvalued" it is meant that an asset today has lost more of its useful value than has been reflected in the depreciation deductions, then, if that can be proved, you have evidence that the depreciation rate is inadequate.

Under the announced principles in T. D. 4422, that is a redetermination of life. It is a determination that the estimate used was excessive and therefore a higher rate of depreciation, or a shorter life, should be used. I think it is a matter of proving what one thinks is true. I believe that that taxpayer and every taxpayer who has a case should emphasize the word that you stressed in the last part of your talk, the word "reasonable." In the one short sentence, Congress has repeated the word "reasonable" twice—"a reasonable allowance for wear and tear, including a reasonable allowance for obsolescence." I, for one, never let the revenue agents or the engineers forget that word "reasonable." They may get sick of hearing it, but I think it has some weight, and if all of us talked about it more, we would get further.

Here is a man who is convinced, no question about it, that the

allowance that he has been taking is not a reasonable allowance. He feels it is necessary to set up more, and yet he feels that the Government, which is supposed to be us, has some strange power to prevent the recognition of what is reasonable. I think either his provision on his books is unreasonable or else the Government is unreasonable. I am inclined to the latter view. I think it is just a matter of carrying conviction on that point.

There isn't any such thing as a depreciation rate prescribed in the statute. There isn't even any provision that depreciation is to be spread ratably over the life of the property. In fact, there is practically no provision as to how the amount is to be determined, and there is one thing that is missing in the law that is quite significant. There are a good many cases where the law couldn't well cover every detail. In many of the cases the Commissioner has been given specific authority to establish regulations. Take the bad debt deduction. A specific authority is given to the Commissioner to establish the provisions under which it is to be taken, especially the provision in regard to a partial bad debt deduction, but the Commissioner was not given any specific authority to establish the regulations in regard to depreciation. On the contrary, the word "reasonable" was repeated twice. I think that in every appeal to the courts, as far as my observation is concerned, when not mere mathematical computations but the question of what is reasonable has been stressed, it has gone over. I think that the B. T. A. memorandum decision in the Washburn Wire case is a good example. The Bureau was attempting some mathematical tricks and the court said it was unreasonable and therefore wouldn't stand for it.

CHAIRMAN BLACKIE: I think that is an excellent exposition of the point.

JOSEPH M. SCHOEMER (*Cost Accountant, Gould & Eberhardt, Irvington, N. J.*): I would like to go back to Mr. Seghers' mention of the variation of repairs with production volume. How many years back did you go and how did you set up your chart?

MR. SEGHERS: First, I can say that in my particular case, it wasn't a point I was anxious to stress. I made my study but I didn't present that particular chart. I found that it was one of those things that I didn't care to overemphasize.

MR. SCHOEMER: Naturally, during the last depression sales volume dropped and repairs went way up, because corporations took advantage of that period of slow activity to overhaul their entire plants.

MR. SEGHERS: Those that could afford to and those that weren't tax conscious followed that practice. I know of some, however, that were a little more ready to capitalize betterments in those days.

LLOYD S. HERTZLER (*Supervisor, Property Accounts, Armstrong Cork Co., Lancaster, Pa.*): I would like to ask whether the obsolescence reserve mentioned by Mr. Trant was set up within a one-year period or over a period of years? Does the obsolescence cover machines similar to other machines which were in operation in that plant?

MR. TRANT: It was all set up in the one year. One of the factors was that we didn't have enough production to run one of the plants and we set up a reserve to reduce that plant to salvage value. The revenue agent disallowed that, and on a rising scale of taxes we were perfectly willing to defer the depreciation deduction to the years in which we had the higher rates.

OBSOLESCENCE OF PRODUCT

WILLIAM F. BURKE (*Assistant Controller, Scovill Mfg. Co., Waterbury, Conn.*): Speaking of obsolescence, I am wondering if we are referring to the obsolescence of the machine in performing its function, or to machine obsolescence due to the obsolescence of a product? A machine may perform its operation well, but, being a special machine, the product that the machine produces may become obsolete. Don't you think that in that case, if a product has a market, say, of five years, that the machine should be considered obsolete in five years?

CHAIRMAN BLACKIE: I think that that point should be recognized. It is a rather pertinent one today because there is a distinct possibility that many companies will not be able to get the materials required for their normal products. They will have to change their product or their line of business if they wish to remain in operation,

and it is quite possible that, in many instances, they will emerge with a product sufficiently different from the one previously made to render obsolete the tools used heretofore.

Has anyone any experience on the point?

MR. SEGHERS: I can suggest a comparison. It isn't the same thing, and yet the same principle is involved. In the case of the machinery in a lumber mill far out in the woods, you figure your depreciation and the normal time that you expect to cut out the timber, either on the basis of time or footage. You are going to abandon a large part of your mill at the end of that time, not because it has ceased to be usable but because you have cut out your timber and it doesn't pay to haul other timber to the mill. That is only an analogy; the situation isn't identical, but that principle has long been recognized by the Bureau in depreciation of lumber properties.

CHAIRMAN BLACKIE: That would be, I think, a form of amortization. The equipment was designed for a particular job or contract—for a specific purpose—and its useful life but not its physical life would be exhausted at the termination of the job.

GEORGE J. ARMSTRONG (*Supervisor of Costs, General Fire Extinguisher Co., Providence, R. I.*): It seems to me that the important question facing us at the moment is not so much the distinction between obsolescence and depreciation or the finer points relative to the establishment of adequate rates for depreciation on particular pieces of equipment. Rather, it is how we are going to record our present depreciation costs because of the extra hours of work that many plants and departments are obliged to put in on account of the present national emergency. These hours are beyond the usual normal hours. In some plants all of the machines are working overtime; in other plants, only in some departments.

I understand that the Canadian Government has issued regulations governing the procedures to be followed by Canadian plants for setting up accelerated depreciation on their records. It seems to me that there might be a very strong possibility that we too may be obliged to do something along similar lines here in the States. I wonder if we could have a discussion along this line.

VOLUME BASES OF DEPRECIATION

CHAIRMAN BLACKIE: Yes, I will be glad to divert the discussion towards the more direct problems of accounting for the effects of increased productive activity and I would like, first, to have a show of hands of those using productive activity methods of providing for depreciation—whether based on machine hours or units of production or any other factors of plant activity. (Eight)

Now I would like to ask these eight gentlemen if they really allow productive activity to be the sole determinant of periodic depreciation, or do they use the productive activity basis merely as a means of allocating the charge within the years of a pre-estimated life period?

JESSE G. KLINE (*Accountant, Atlantic Refining Co., Philadelphia, Pa.*): In the poll just taken there may be others like myself with companies which use both bases. I am referring specifically to automotive transportation equipment. The entire depreciation is not taken on a straight-line basis. Where a piece of equipment has a normal day, let us say, of eight or ten hours, depreciation is on a straight-line basis. Another piece of equipment may be used during the day for delivery to customers, and at night may be used for delivery of stock from one terminal or warehouse to another. In the latter case depreciation is on a mileage basis. Some predetermined mileage for this type of machine has been set up by the engineers of that particular department. The equipment is then depreciated on a mileage basis.

CHAIRMAN BLACKIE: That is an excellent illustration. The mileage was estimated in advance and the cost was amortized as the miles were run, without direct reference to the number of months or years the equipment might remain in existence. However, I was thinking more of machine tools. I wonder if anyone has an application to such assets.

MR. MCCLUSKEY: We have problems in our plant which we solve the other way around. In connection with tools such as bakelite molds, we try to estimate the number of pieces we can get out of a mold, and what our normal production is. Then we convert that back on a time basis. Production, in these cases, is the basis of calculating depreciation.

WILLIAM C. ARMSTRONG (*Secretary & Treasurer, Rockbestos Products Corp., New Haven, Conn.*): We depreciate on a unit basis, that is, on a time basis worked backwards. We assume what a normal year is and set up straight-line depreciation as normal. Then, on the basis of the percentage of activity to that so-called normal, we determine the amount of depreciation that we take.

At the present time, we are operating three shifts a day. Back in the days when we were operating only one shift and we did not have 100 per cent activity, we didn't have to take a full so-called normal year's depreciation, and we saved on taxes. When we got to a two-shift basis, the Bureau of Internal Revenue said that we could not take 200 per cent of normal for a year's depreciation. After some discussion, we decided that we would establish a ceiling of 150 per cent. Now that we are operating three shifts, twenty-four hours a day, seven days a week, we get 150 per cent of normal as a ceiling of depreciation.

CHAIRMAN BLACKIE: Might I ask why you accepted 150 per cent?

MR. ARMSTRONG: Well, it was attrition, a wearing down process.

TREATMENT IN COSTS

CHAIRMAN BLACKIE: Let's get back to Mr. George Armstrong's question.

Are there any reasons why the acceleration of depreciation, or let me say the additional depreciation over and above normal, should be treated for cost accounting purposes in any way different from that accorded the normal? The Bureau of Internal Revenue would, I believe, be concerned with the treatment given the additional depreciation charges only in so far as it might affect the inventory costs for the annual balance sheet. I think that if it has been the practice to apply normal depreciation charges to the cost of the product, then the failure to do so in respect of the additional depreciation charges might be considered an inconsistency in the basis of inventory costing and might require consent. I myself can't see any justification for considering the additional depreciation in any way different from the so-called normal.

WILLIAM A. MACKIE (*Mathieson, Aithin & Co., Philadelphia, Pa.*): I would like to raise a question on that point. I assume that you would incorporate the added depreciation in your normal overhead rate. These are predetermined before the start of your productive period. At what level would you set your depreciation in predetermining your normal burden rate?

There is a question in my own mind as to how you would embody it in your predetermined rate. The burden thus applied follows through into your inventory at the end of the year, and this may result in a question on the part of your Internal Revenue man.

CHAIRMAN BLACKIE: I would be governed in a case such as you mention by the same considerations which would affect my changing of a predetermined overhead rate or a standard cost. If the amount involved were substantial, or "material" as the S. E. C. regulations would say, then I would make the change; if it were not, then I would leave it, perhaps as unabsorbed burden or as a variance. Unless, however, the amount involved were substantial, I wouldn't spend much time on accelerated depreciation.

NORMAL DEPRECIATION

THOMAS J. BURKE (*Secretary-Treasurer, Sulphite Paper Manufacturers Association, New York, N. Y.*): The point that appeals to me in listening to the discussion is, how did you arrive at what is a normal rate of depreciation? Wouldn't that have some effect on the method adopted to take care of the extra use?

PETER H. FLANIGAN, JR. (*Internal Auditor, Schenectady Works, General Electric Co., Schenectady, N. Y.*): As I understand Mr. Burke's point, he is asking whether the normal rate of depreciation is a rate based on an anticipated production for this year only, or a normal rate based on a business cycle. If the latter, it may result in overliquidation in periods of high production and underliquidation in periods of low production, and thereby earn the title of a normal rate. In that case it is apparent that the normal rate covers more than a current year's production. It would cover also years when your production was higher than normal which would be compensated for by years when your production was lower than normal. In this case, your accelerated depreciation would not start

until you arrived at the point which your peak year contemplated, i.e., until your production reached the point of the high year that was contemplated in your normal rate, which would be the year of your peak production.

CHAIRMAN BLACKIE: It has been my impression that a normal depreciation rate generally contemplates a level of plant operation lying between the normal extremes of productive activity. Where this is the case, your point, which is well taken, would be that as long as the level of production lies within these so-called normal extremes, provision for an acceleration of depreciation is not justified—or, perhaps, alternatively, that if provision for accelerated depreciation is justified in periods of abnormally high activity, then recognition should be given to decelerated depreciation in periods of abnormally low activity.

Before we close, I would like to hear some discussion of the possibilities which might arise in the event that a claim for accelerated depreciation is successfully sustained. Like almost every other action taken primarily for immediate tax purposes, the successful claim for additional depreciation is not without its dangers. If the claim can be substantiated wholly on the conditions prevailing at the end of the year, presumably by an engineering study, it seems that many of the dangers may be circumvented; but if it rests on the grounds of productive activity during the year, there appears to be nothing to prevent the Bureau from going back, let us say, to 1937, which was a fairly active year, and maintaining that productive activity in that year was also high. Even if this were to involve a refund for such prior year, it would have the effect of reducing base period earnings for excess profits tax purposes for many years to come, and the possible benefits to be derived from the substantial deduction for accelerated depreciation might be wholly or partly wiped out. May I have some comments on this aspect of the subject?

MR. SEGHERS: I understand that in many businesses 1936 was the good year. Getting to the growth period situation, you may be glad to have additional depreciation allowed to you in 1936, which will bring down the 1936 year and increase your credit on the growth period basis, because now you want to get down your income of 1936 and 1937 as much as you can.

I think that many taxpayers would be cheered to hear an optimist

speak of continuing for years and years to get the base period average earnings credit. You may wish for it but I think you are an optimist to expect it.

CHAIRMAN BLACKIE: That was a good point concerning the "growth" company—although it would seem to me that an accelerated rate of depreciation for the base period years prior to 1940 would always have the effect of increasing excess profits taxes for subsequent years.

I suppose I would rather be optimistic in hoping for indefinite continuance of the base period average earnings credit; but even under the invested capital option, accelerated depreciation during any part of the base period would have the effect of reducing invested capital.

USE FOR CORPORATE PURPOSE FAVORED

N. MADISON CARTMELL (*Assistant to the President, General Cable Corp., New York, N. Y.*): Before we adjourn I would like to ask a showing of hands of those who think that increased depreciation is justified during these periods of high activity, even for stockholders' reports or internal use rather than for tax purposes.

CHAIRMAN BLACKIE: Let us consider that question now. May we have a show of hands by those who believe that, whether accelerated depreciation is sustained for tax purposes or not, it should be given recognition in corporate accounting? (Most of those present raised their hands.) May we have a show of hands by those who believe the opposite—that it should not be given recognition in corporate accounting? (One)

ALFRED G. BLOCK (*Secretary & Treasurer, Barnes Drill Co., Rockford, Ill.*): Would it be fair to carry that question a little further and ask how many are actually doing it?

CHAIRMAN BLACKIE: How many are actually making provision for accelerated depreciation? (Twenty) That may indicate a difference between those who theorize and those who practice, or it may just mean that many haven't yet got around to the point of doing something about it—that it is under consideration—or that, if

it is to be merely a stepping up of rates, the decision need not be made until the end of the year.

Let's close now with one other thought. In our consideration of accelerated depreciation, we have been thinking mainly of old equipment acquired prior to the present emergency. Many manufacturers are, however, acquiring new equipment for defense production and there is a question as to the possible advantages or disadvantages of claiming accelerated depreciation rather than amortization for such defense facilities. The Treasury Department has been rather non-committal on this matter of amortization. Many Certificates of Necessity have been granted; but few Certificates of Non-Reimbursement have been issued and there is so much room for controversy in this latter subject that it might be well worth giving consideration to both sides of the picture at all times.

We have raised a good many points here—not by any means all, but enough, I think, to stimulate our thinking. I would like to thank those who have contributed to the discussion and I hope that, among us, we may have been of service in indicating some of the factors to be taken into account in considering the effects of fluctuations in productive activity on provisions for depreciation. Thank you!

. . . The meeting adjourned at three-thirty o'clock . . .

PROBLEMS IN AMORTIZATION OF INVESTMENTS IN PLANT AND EQUIPMENT

Chairman: HARRY C. McCLUSKEY

Treasurer, Kellogg Switchboard & Supply Co.,
Chicago, Illinois

CHAIRMAN McCLUSKEY: This group has assembled for the purpose of discussing problems in the amortization of investments in plant and equipment. The term "amortization," as it is used in connection with the defense program, has a meaning not unlike its usually accepted definition in accounting terminology. It has, however, taken on a new significance and that is the legal significance. The purpose of amortization allowances as provided in the Second Revenue Act of 1940 was to enable a contractor engaged in defense work

to write off within a reasonable time—that is, a reasonable time from a business standpoint—for tax purposes the facilities which he purchases for defense work.

There are two types of contracts in which the purchaser of emergency facilities may take advantage of the amortization provisions of the Second Revenue Act of 1940; first, facilities purchased and paid for by the contractor in order to produce defense materials under a contract without government financing; second, under the emergency facilities plant contract, known as the bankable contract, which provides for the purchase of emergency facilities to be paid for in sixty monthly installments by the Government.

In the first case the contractor finances the facilities and pays for them, and in the second, the contractor finances them and is paid in turn by the Government.

We will endeavor to discuss amortization problems, both from the standpoint of the tax laws and from the standpoint of the financial and accounting questions that may be involved. In order to organize our discussion, I have divided it into several groups:

1. What is the amortization deduction?
2. How is the amortization deduction computed?
3. The effect of amortization on taxes.
4. The procurements of certificates necessary in order to secure the amortization deductions in your income tax returns.
5. General discussion of other points not mentioned in the foregoing.

As you know, the discussion that takes place here will be recorded in the *Year Book*. As many as possible should take part in the discussion because it is going to make a very valuable record of what we know to date about these amortization allowances.

The more that is known of the procedures that are necessary in connection with our national defense program, the easier the job is going to be for our Government to function in this trying period; time will be saved for ourselves and for our Government, and time is one of the most important elements in our defense program.

We have not as yet had much experience in our attempts to set up amortization reserves on our books, but, nevertheless, we will have to go ahead and do the best we can until we get rulings and decisions to guide us.

The Second Revenue Act of 1940 contains a provision for taking the amortization deduction. The normal period is sixty months.

This period may be less than sixty months under certain conditions. The emergency period or the sixty months' period can be ended by Presidential proclamation or by action of the Secretaries of War or Navy, certifying that the facilities are no longer necessary for national defense.

Why was the period of five years designated as the amortization period? It was a period which was arbitrarily determined as being a reasonable period in which to take advantage of this deduction. We hope they have overestimated the period and we will soon be able to take advantage of some Presidential proclamations which will state that the emergency has ended. Nevertheless, Congress had to set some time limit, and five years was that limit.

The amortization deduction is available only to corporations. An individual, apparently, cannot take the deduction.

What emergency facilities can be amortized? The answer is land, buildings, machinery or equipment, or any part, the construction of which has been completed or acquired after June 10, 1940. This is an arbitrary date, and it was chosen as a compromise by the House and the Senate.

May a firm which expands to fill British orders be certified so that they can take the amortization deduction? Provision for doing so has been made in those cases where it is clear that our own national defense needs can be served by these new facilities.

The second kind of contract, before mentioned, whereby emergency facilities can be amortized and the deductions taken therefore, was in connection with emergency plant facilities contracts. If the Government is going to pay you for your investment in emergency plant facilities, why should they allow you to take the amortization deduction? In this case, you really need the certificate for taking the amortization deduction because the amount of the reimbursement by the Government will probably be considered as income by the Bureau of Internal Revenue in your tax returns. This income will therefore be offset by your amortization deduction.

May we have some comments in connection with this emergency plant facilities matter and the taking of the amortization deduction?

PROBLEM OF THE SUB-CONTRACTOR

EDW. WM. KRUEGER (*Partner, Walton, Joplin, Langer & Co., Chicago, Ill.*): I have in mind a tool and die manufacturer, loaded

with defense work on sub-contracts at fixed prices. As a result, he has been purchasing a large number of machines to get out government work.

The application for necessity certificates has been made accompanied by necessary documents. He has some civilian work. All the work flows to a jig borer which he may use for both government and civilian orders. What I would like to know is whether the partial use of that borer on civilian orders would preclude him from deducting amortization for it. About 90 per cent of his work is on government contracts.

JOHN A. FLYNN (*Auditor, Manning, Maxwell & Moore, Bridgeport, Conn.*): We have such a situation and did receive a certificate of necessity.

CHAIRMAN MCCLUSKEY: Have you received a certificate of non-reimbursement?

MR. FLYNN: We received a certificate of necessity only.

CECIL L. CLARK (*Accountant, Sangamo Electric Co., Springfield, Ill.*): Can you get this amortization over sixty months on any type of contract? I had the impression that it applied only to cost-plus contracts. If you have a contract at a fixed price, can you still get amortization over sixty months?

MR. FLYNN: All of our contracts are bid contracts. We are now trying to secure the certificates of non-reimbursement.

SIDNEY R. CATSIFF (*Supervisor of Costs, General Electric Co., Fort Wayne, Ind.*): Mr. Flynn said he did get a certificate of necessity. Was this equipment set aside and specifically marked as being used only on defense contracts or was it also used for other work?

MR. FLYNN: Because of the nature of the product it was not possible to set aside certain equipment to be used on defense work only.

MR. CATSIFF: I might add that in our experience we have been unable to get a certificate of necessity except where we could clearly

indicate that the equipment would be used, practically 100 per cent, for defense work.

I understand that you can obtain a certificate of necessity regardless of whether or not it is a cost-plus-fixed-fee or fixed-price contract. I understand there have been just about seventeen certificates of non-reimbursement issued to date.

ALFRED G. BLOCK (*Secretary & Treasurer, Barnes Drill Co., Rockford, Ill.*): It is my understanding that where you do not receive Government funds, you do not need a certificate of non-reimbursement. I have been so informed by the Government. We have been granted several necessity certificates. We manufacture machine tools and practically 100 per cent of our business is defense work. We applied for the certificate of non-reimbursement, but we were informed that we did not need it inasmuch as we did not receive financial aid from the government.

OTTO F. TAYLOR (*O. F. Taylor & Co., New York, N. Y.*): I have just received word by telephone that a sub-contractor, selling at a fixed price to holders of defense contracts and selling commercially from stock as well, has received certificates of necessity for all new equipment. His application for a certificate was supported by affidavits from prime-contractors who were his principal customers. Each principal contractor stated, in his affidavit, the percentage of his defense work.

This sub-contractor (I think sub-manufacturer would be more exact) does not manufacture on contract, but for stock. He obtained certificates on all of his new equipment by reason of the fact that most of his customers were engaged principally on defense work.

PAUL D. SEGHERS (*Tax Consultant & Accountant, Barrow, Wade, Guthrie & Co., New York, N. Y.*): Could I ask Mr. Block, who just said there was no need for a certificate of non-reimbursement, where there was no financial assistance by the government, whether he means that his company is not supplying any goods to the government on government contracts?

MR. BLOCK: In our case, our business is received through jobbers. We do work indirectly for the government.

MR. SEGHERS: You don't have any direct government contracts?

MR. BLOCK: That is right.

CHAIRMAN McCLUSKEY: Then you are a sub-contractor, I presume, under this law. A sub-contractor, as I understand it, does not need a certificate of non-reimbursement.

MR. CLARK: My question is along the same line. For example, you have a regular product which you have been selling consistently to the government. You haven't been billing it to the government; it has been sold to another manufacturer who sells it to the government. Now, you can expect that they are going to ask you to fill more orders for this particular product and that you are going to have to expand your facilities to meet this demand. Does the fact that you do not sell directly to the government make any difference? Does that disqualify you from taking advantage of amortization over sixty months?

FRANK J. COLKOS (*Accountant, RCA Mfg. Co., Camden, N. J.*): I would like to point out to the gentleman who a few moments ago indicated that he was advised by the government that a certificate of non-reimbursement wasn't necessary, that the purpose of this certificate is to establish conclusively with the government that the contractor is not recovering, in the cost of supplies sold to the government, an amount representing greater than normal exhaustion, and wear and tear of the facilities which are certified as necessary for national defense. If the contractor can't substantiate that fact at some future time, and if the government can eventually establish that the contractor has recovered such greater than normal amounts in costs, I think that the government will be inclined to assume a lien on such facilities to the extent of such greater than normal recovery. I think, therefore, that it is in the interest of the contractor that such a certificate be obtained.

CHAIRMAN McCLUSKEY: Is there any question regarding the necessity of a sub-contractor obtaining certificates of non-reimbursement?

MR. COLKOS: My latest understanding of the situation in Washington is that Congress is contemplating the elimination of the issuance of these certificates. These certificates should be issued only

after a minute scrutiny of supply contract costs and may certify to a condition as of today but cannot anticipate what might constitute "normal" costs in the distant future in the case of those contracts which might last over a period of years. As I understand it, it is all pretty much in the air and consequently, as has already been pointed out, only seventeen certificates have been permitted to date.

MR. SEGHERS: I would like to refer to David Ginsburg's talk on the amortization deduction. I suppose you have read it and had it in mind during this discussion. While it seems to have a very severe attitude toward the manufacturers, the author does say, if my memory serves me right, that neither a certificate of non-reimbursement nor of government protection is required for a sub-contract. As far as I can recall, that was the only point that approached any concession to the manufacturers.

MR. CATSIFF: As I understand it, you will not be able to get any relief by way of being allowed a deduction for tax purposes unless you do have this certificate of non-reimbursement. It has been our experience that these certificates are almost impossible to obtain so far, mainly because of the reason previously mentioned, that there is some question whether Congress is going to stick by its original ruling or not.

CHAIRMAN MCCLUSKEY: It is reasonable that the Treasury should be supplied with such a certificate of non-reimbursement, because a contractor, who has a contract for supplies for the government, may include in his price the cost of his facilities.

MR. COLKOS: The allowance for wear and tear must not be greater than the normal charge usually included. If it is, the government will contend that the contractor is being "reimbursed indirectly," as the term is used in the Second Revenue Act of 1940.

PROOF OF AMORTIZATION IN FIXED-PRICE CONTRACTS

CHAIRMAN MCCLUSKEY: To illustrate this point let us assume the following situation: A contractor sells the government on a price-per-piece basis and includes a machine valued at \$20,000 in his costs. He asks for a necessity certificate and permission to amortize the cost of the machine over the next five years. If this is

granted, he would be paid for the machine in the price and he would also be allowed the amortization deduction over the five-year period, saving in taxes possibly 50 per cent more of the cost, depending on how much money he makes in the next five years. It would not be fair to ask the Treasury Department to allow this deduction unless they knew that there was nothing in the price to cover the facilities which the contractor required in the production of the supplies covered by the contract.

MR. SEGHERS: I am sorry to hear you state it that way, because I hoped I would hear some refutation of Mr. Ginsburg's theory. In looking at a price, you can't say how much depreciation is in it. I don't believe that is possible. I don't believe you can tag it, and I don't believe that is what Congress said or meant to say. Congress spoke of a specific provision in the contract for reimbursement of the cost. If you charge \$20,000 for supplies and state that the supplies cost you \$10,000 and that you are making \$10,000 profit, I can't see what right the government has to say, "No, you are only making \$5,000 profit. You have charged an additional \$5,000 of depreciation."

By what right can the government say you have taken more than normal depreciation? I am speaking of a flat price. You have charged so many dollars for the supplies. What is the difference between getting \$10,000 profit on a \$20,000 sale or charging an additional \$5,000 to depreciation and saying, "My profit is only \$5,000"?

I cannot see by what right anyone in the government, under the statute as it is written, can say that there has been an excessive charge for the use of equipment when it is not mentioned in the contract and you are not charging a cost-plus price or any variation of a cost-plus price, but you are simply charging a flat sum. If you make \$10,000 profit or \$8,000 or \$6,000, there is no one who can say, "That is so much profit and a part of it is excess depreciation."

That is all I can read out of the law—your views and Mr. Ginsburg's opinions to the contrary. I just don't see it. I hoped you would take issue with Mr. Ginsburg on that point.

CHAIRMAN MCCLUSKEY: Suppose the contractor included in the price the cost of a \$20,000 machine he had purchased. The government may well say, "You have included the cost of the machine in the cost of your products and its price; therefore, you cannot take the amortization deduction also."

I might argue if I were the contractor that I could have charged a larger profit and could have purchased the machine out of such profit, but I don't think I would get away with it. The government will certainly scrutinize these contracts to see whether we have included anything in the costs thereof in the way of cost of new facilities acquired for the purpose of producing this supply contract.

MR. SEGHERS: It seems that we are talking about two different things. I am speaking of the price you charge for something you sell to the government. You are not putting anything in there. You are saying, "I will charge you so many dollars for these supplies that you are buying." You are not putting in labor, material or anything else. You are charging them so many dollars. How can you, the government, or anyone else say that you have included a certain amount of depreciation in the price you charge them? You have charged them enough to recover all your costs, no matter how they are computed, or you hope you have, and some profit perhaps. If you have charged them that price and when you manufacture the supplies they cost you more, are you going to say they owe you some depreciation? You will get only what you have agreed upon and no more.

I cannot see how the government can look at a lump sum price that they are paying you for an article and say, "No, you didn't make a big profit on this sale. You made a small profit, but you charged too much amortization." You did not charge them any amortization, you charged them so many dollars for the supplies.

MR. COLKOS: You must remember that we are talking only about the amortization of emergency facilities. When the defense program was initiated, the government, in view of the emergency need, offered to finance these facilities or to encourage private financing. But they did want to insure themselves that in the event a contractor used private financing, the government would not actually be doing such financing through inclusion of the cost of such facilities in supply costs. They felt that if they were doing the financing that they would be justified in acquiring an interest in the facilities. To insure that the government was not indirectly paying for the new facilities they have attempted to tell you what you may charge into your costs in connection with government contracts.

If you excluded from costs all depreciation and amortization of

defense facilities and received their cost directly from the government under the terms of a facilities contract, the government would certainly assume title to such property. We are talking only of emergency defense facilities. In the case of normal facilities, the government has never had, in so far as supply contract costs are concerned, the power or the privilege to come in and tell you what you may charge into costs.

MR. SEGHERS: Since we are discussing amortization, I realize you are talking about defense facilities; that is all the statute deals with. I am speaking of what the statute provides. When the necessity certificate is given by one branch of the government, it is because they think equipment is necessary. Thereafter the manufacturer sells goods at a fixed price. The manufacturer does not guarantee what his costs are, nor does the government guarantee him his costs. The government says, "We will gamble with you that we want this and we will pay so much."

The manufacturer says, "I will gamble with you that I can manufacture it for less than the price and make some money."

The manufacturer has equipment for which a necessity certificate has been issued. The government has seen fit to say that that machinery acquired by the manufacturer is necessary for national defense. We come to the point of getting the non-reimbursement certificate. Let us suppose that the manufacturer has not taken any government money to build or acquire this machinery. I am not talking of a case where there is an emergency plant facilities contract. The manufacturer has this flat contract and six or eight months later, after the law is passed and after all this argument, the government or some branch of the government says that he is not entitled to a non-reimbursement certificate because perhaps he did not make as much money as he thought. They maintain that instead of making as large a profit as he claimed, he was charging a larger amount on account of amortization than he was entitled to.

Now, it seems to me that the law is very clear on the point that reimbursement means reimbursement specifically provided in a contract between the taxpayer and the government. As for this theory that you can take a part of a charge and say that part represents excessive amortization, I do not see any authority for it in the statutes, in the Congressional Record or in logic.

CHAIRMAN McCLUSKEY: Section 124(i) states in part—

“If the taxpayer has been or will be reimbursed by the United States for all or a part of the costs of any emergency facility pursuant to any contract with the United States, either—

“(1) directly, by a provision therein dealing expressly with such reimbursement, or

“(2) indirectly, because the price paid by the United States (in so far as return of cost of the facility is used as a factor in the fixing of such price) is recognized by the contract as including a return of cost greater than the normal exhaustion, wear and tear,

no amortization deduction with respect to such emergency facility shall be allowed for any month after the end of the month in which such contract is made, unless the Advisory Commission to the Council of National Defense, and either the Secretary of War or the Secretary of the Navy certify to the Commissioner that such contract adequately protects the United States with reference to the future use and disposition of such emergency facility.”

NEED FOR CERTIFICATE OF NON-REIMBURSEMENT

WILLIAM H. SLAVIN (*Controller, Hanson-Van Winkle-Munning Co., Matawan, N. J.*): I think I can clarify this situation. You have two kinds of contracts to consider here. If you have a cost-plus or a cost-plus-fixed-fee, you must get a certificate of non-reimbursement. It is extremely important. However, if you take a bid contract, it does not become so important and it fits in, it seems to me, with Mr. Segher's concept of selling price to the government. In the case of a bid contract, the government is not concerned with what you include in your costs. You may even be losing on the deal.

MR. COLKOS: May I make one final point, please? It must be recognized that the government is only trying to protect its own interests. If a contractor were permitted to charge any amount of depreciation or amortization which he desired to a supply contract, I don't believe any contractor would take an emergency plant facilities contract, because under the terms of that contract he would be reimbursed directly but title to the facilities would pass on to the government. If he didn't take a facilities contract but was permitted to recover the cost of defense facilities in price, the government would be paying for the facilities but would never acquire title. That is what the government is trying to protect itself against.

MR. SEGHERS: The emergency plant facilities type of contract is excellent, because at the end of five years the manufacturer has the option of either buying the equipment back at the depreciated cost—not the price paid, but the cost minus the depreciation. If business is good or replacement costs have gone up, he has a plant at a bargain price; if business is bad, he does not buy it. So he has not lost on that. He has his money back and still has a chance to buy the plant at a bargain price. If the market has gone down, he can still buy it below depreciated cost if the government will consent.

But the question here is whether, in the case of a flat-price contract, the contractor has to prove that there has been no excess depreciation. According to Mr. Ginsburg's article, after the government has accepted a fixed-price contract in which there is no mention of a special rate of amortization, the government will hold up the certificate of non-reimbursement and put on the contractor the burden of proving that his profit is profit and not an excess reimbursement of his cost. It seems to me that this is asking you to prove the impossible, because no one can look at a bid and say that it includes so much reimbursement of cost in excess of normal depreciation, and so much profit.

MR. CATSIFF: I would like to direct this question to Mr. Massel. Let us suppose that I have just taken a fixed-price contract. I have received a certificate of necessity for the equipment which I require to perform the contract. I want to get relief in my income tax. As I understand it, I will require a certificate of non-reimbursement. Just how do I go about it and what do I have to prove, or does the government have to do the proving?

As I understand it, I have to prove that I have not or will not obtain, through the execution of this contract, more than a fair return or profit.

MARK I. MASSEL (*Cost Consultant, Bureau of Research and Statistics, O. P. M. Washington, D. C.*): Since you will use your equipment over a period of time you will have to establish the fact that you have only normal depreciation in your prices over that period. In other words you cannot get a certificate of non-reimbursement which will apply to future contracts. You can procure such certificates only to cover the contracts already in effect.

You should bear in mind that, even if you do not have a certificate

of non-reimbursement, you may be able to take amortization for tax purposes. The Treasury Department may allow the amortization charge independently. A certificate of non-reimbursement precludes the Bureau of Internal Revenue from determining whether you may or may not take amortization. If you do not have such a certificate, you may still appeal to the Bureau of Internal Revenue for amortization. You must, however, have a certificate of necessity.

MR. CATSIFF: To be safe and to have any assurance I can make the deduction, I should have a certificate of non-reimbursement.

MR. MASSEL: That is right.

CHAIRMAN MCCLUSKEY: I have a question for Mr. Massel. If I should receive a certificate of non-reimbursement and it is presented to the Treasury Department, can they overrule that certificate and prove that it was wrong, issued incorrectly, or must they accept it at its face value?

MR. MASSEL: I cannot give a definite answer to that. It seems to me that they will accept it at its face value. However, they will accept it only as it applies to contracts in effect before the date of the certificate, since it cannot apply to subsequent contracts. Furthermore, their acceptance means merely that the base value, to be depreciated or amortized, will be divided by five; but the Bureau of Internal Revenue has to determine what the valuation of the base is.

MR. SEGHERS: May I ask Mr. Massel a question? I want to refer to our \$20,000 question. A corporation accepts a government contract for supplies at a fixed price of \$20,000. The seller, the taxpayer, seeks a certificate of non-reimbursement, and the government says, "You must prove that you do not have too much depreciation included in the price." The total cost exclusive of any depreciation or amortization, we will say, is \$12,000. The contractor says, "We have charged against this job \$2000 for amortization. Our total cost is \$14,000 and we make \$6000 profit."

The Government says, "No, we compute your cost at \$12,000 base cost, \$2000 depreciation and \$3000 amortization, bringing the total up to \$17,000, and \$3000 profit. Since you have charged too much

amortization, we will not give you a certificate of non-reimbursement."

How can anyone look at a statement of that kind and say that they have not made \$6000 profit, but have made \$3000? That is the position taken by the government. They will say, "We consider \$3000 your normal profit." Who is going to establish what is normal profit? Can you give us any light on that?

MR. MASSEL: You have a very neat problem there. I do not know the answer. However, as a practical matter, unless the government takes the position that there is such a thing as normal profit, it simply cannot determine whether or not a price includes normal depreciation or amortization unless it accidentally stumbles across some cost estimates which show that amortization was included. Short of that, in order to evaluate a situation after it has passed, without being able to explore the regions of the contractor's mind, the Government must start out with some notion of normal profits.

MR. SEGHERS: The trouble with that is that you are speaking of what the government has to do. Apparently the government's position is that they will sit tight and give no certificate of non-reimbursement. I heard someone mention that only seventeen certificates have been issued so far. I don't know whether there have been any more. I know there is practically a log jam at Washington, a refusal to issue any non-reimbursement certificates if you can't prove how much is profit and how much is amortization. In other words, some branch of the Government—I don't think it is the Treasury Department; I know it isn't the War or the Navy Departments—is putting a stumbling block in the way of manufacturers and nullifying completely the intention of Congress to allow the taxpayer some promise of relief that he could rely on in advance. This is throwing business into the same muddle of uncertainty that prevailed before.

I would like to hear a discussion of this situation because no one who has a government contract has any feeling of security as to that contract. Amortization is not tied to your certificate of necessity. It is tied to a certificate either of non-reimbursement or of government protection. Of course, the former is not legally required, but in practice it is almost essential. If you cannot prove non-reimbursement in respect to every single government contract you have, you may not be allowed the amortization deduction.

CHAIRMAN McCLUSKEY: That is right, the certificate of non-reimbursement is necessary to prove the amortization deduction in income tax returns.

WILLIAM C. ARMSTRONG (*Secretary & Treasurer, Rockbestos Products Corp., New Haven, Conn.*): There is another angle to this situation that was not mentioned which I think is important. After you have applied for a certificate of non-reimbursement, if you continue to get more government contracts, you must continue to apply for certificates of non-reimbursement, because it will only apply for a sixty-day period. So at least every sixty days, you must apply for another certificate of non-reimbursement if you continually get new contracts.

CHAIRMAN McCLUSKEY: It is my opinion that you should have a certificate of non-reimbursement for each and every contract.

LEONARD E. ZASTROW (*Assistant Controller, Bucyrus-Erie Co., South Milwaukee, Wis.*): I can substantiate that. We have been told the same thing; we have to get a certificate for each contract.

MR. COLKOS: One certificate may cover several contracts but it certifies specific contracts.

MR. ARMSTRONG: There is another point I would like to make. That is that in the application for the certificate for non-reimbursement, you must certify that you are not increasing your prices because of additional amortization. The main point of difference is that this applies if this is a bid contract and not on a cost-plus basis. I am speaking only of the bid contract.

We submitted a price schedule for the past several years showing that our prices have not been increasing, and agreed that we would not increase our prices because of this additional amortization. What I would like to hear discussed, is what is the proper procedure as regards accounting methods. My idea is to charge off what would be normal depreciation, the same as we do on other similar machines, and then to take the difference as amortization and charge it off in the other expense section of the profit and loss account.

CHAIRMAN McCLUSKEY: That may be a good plan. It may make it difficult, however, when the income tax examiner tries to

tie up, say, a normal 5 per cent or 2 per cent depreciation rate in your depreciation accounts and with relative rates of, say, 18 or 15 per cent in your amortization accounts. It may be a better plan to account for the facilities separately and amortize them separately.

MR. FLYNN: Would it be in order to ask if anybody in the room has received a certificate of non-reimbursement? (None.)

CHAIRMAN MCCLUSKEY: Does anyone know of anyone who has received one? (None.) May we have some comments on the amortization period and how it may be terminated?

REIMBURSEMENT UNDER E. P. F. CONTRACTS

MR. COLKOS: Under the terms of the Second Revenue Act of 1940, amortization may begin in the month in which the facilities were completed or acquired or it may begin in the succeeding taxable year. A contractor may abandon amortization at any time in favor of depreciation, in which event he may not go back to amortization unless the President proclaims the end of the emergency before five years from June 10, 1940.

In viewing this, two points must be borne in mind with respect to amortization of the cost of facilities acquired under emergency plant facilities contracts:

1. Under final reimbursement, title to the facilities will pass to the Army or Navy Department.
2. Reimbursement must be included in income to permit the contractor to take amortization.

If a contractor does include reimbursements in income but abandons amortization in favor of depreciation during this period of reimbursement, title will still pass to the government. Thus, the contractor will eventually wind up with an unamortized or undepreciated asset on the books that he does not own. As a second point, the contractor may decide to exercise an option to begin amortization in the succeeding taxable year whereas reimbursements will be shown as income in the current year. There, too, he will have an unamortized balance on the books of an asset with respect to which title has been transferred. I would like to ask Mr. Massel whether the government has recognized this condition and if anything is being done about it.

MR. MASSEL: No answer has come to my attention.

MR. COLKOS: I may mention that I have written to the Treasury Department. I also sent them a copy of our contract about two months ago, and we haven't heard anything from them, as yet.

MR. SEGHERS: I went to Washington on a related problem. I didn't ask that question, because I didn't think it could arise. That is, I don't see where anyone would care to exercise those options under those particular conditions. But I did have a similar question under an emergency plant facility contract which, by the way, does not say you must return the reimbursement payments as income, but says you cannot claim amortization unless the reimbursement payments are included as income. This is a clever piece of drafting and evades any constitutional question.

Reimbursements under the E.P.F. contract do not commence until the completion of the plant and since it is all scheduled in Exhibit A, until every item in Exhibit A is completed, it is apparently the position of all branches of the government, that the E.P.F. contract is not completed. However, the Treasury Department, at least, seems to lean toward the view—although all the answers I got down there were practically the same as the one we just heard—that you may have on one necessity certificate various dates of completion of the facilities covered by that certificate.

For instance, you may have bought a machine in October, 1940, and installed it on the floor of your plant in January, 1941. Your plant started operation in May, 1941. Yet you may have other machines on order that you are going to get during the next eighteen months, covered by your original E.P.F. contract and by your original necessity certificate. Here is the conflict that arises—you must start amortization either in the year of construction, acquisition, et cetera, or in the following year. If you bought a machine in October, 1940, you must start amortization in 1941 at the latest. You could have started it in 1940, if that machine is to be considered as a separate facility. In other words, you have two dates of completion; one is the date of completion of the E.P.F. contract as a whole. All those to whom I talked interpreted an E.P.F. contract as meaning that the government reimbursement doesn't start until the last item called for by Exhibit A, as written or as amended, has been delivered. Say that won't be until some time in 1942. In the meantime, if you consider

that each machine that you put in is a separate facility, you may have completion dates strung out all the way from October, 1940, to the middle of 1942, and you are going to have to reach a decision as to when and how you are to take the amortization on those items, and your amortization will not correspond exactly with your reimbursements, as had been originally thought.

In other words, it was thought: Here are reimbursements to run for sixty months and amortization to run for sixty months. But you cannot make the two agree, because your dates of completion for the purpose of amortization are different from your single date of completion under your emergency plant facility contract. That is a joker which anyone who has an emergency plant facilities contract will run into, and it isn't apparent on its face. It only becomes apparent when you study the provisions of the contract and of the various certificates.

A further difficulty is this: Your necessity certificate usually is issued on the basis of your emergency plant facilities contract. In other words, they simply take a copy of your original Exhibit A. Before you get your plant finished, you will have many plant change authorizations from the local purchasing officer. Those plant changes are amendments to your E.P.F. contract, but they are not automatically amendments to your necessity certificate. You will not be entitled to amortization with respect to those additions, new items, unless you get separate necessity certificates.

CHAIRMAN McCLUSKEY: I hope the war ends before all that happens.

C. M. LEEDS (*Assistant Budget Director, Wright Aeronautical Corp., Paterson, N. J.*): I am a little confused on that last proposition. I just wondered if Mr. Seghers would explain to me how he gets amortization on an E.P.F. contract facility.

MR. SEGHERS: If you have a certificate of government protection, you are entitled to take amortization. Theoretically, your amortization will offset the reimbursements you receive under your E.P.F. contract.

MR. COLKOS: I don't believe Mr. Leeds' question has been answered. The contract says unless reimbursement amounts are included in income, no amortization will be allowed.

MR. SEGHERS: Right!

MR. COLKOS: That means, then, that if you don't include these reimbursements as income, you can't exercise your options under the Second Revenue Act of 1940.

MR. SEGHERS: That is true, but that provision was put in with the thought that the courts would hold that such reimbursements are income. Since there was some doubt on that point, it was put in that way; if they were held not to be income, then the contractor, the taxpayer, is bound by his contract not to claim amortization. But even if he does report his reimbursements as income, unless he modifies his contract, he will receive no reimbursements in 1941. The plant is in operation, but he will receive no reimbursement until he either modifies his contract or installs the last piece of equipment called for by his E.P.F. contract.

MR. COLKOS: The only other way of handling it would be to treat the reimbursement as a reduction of the asset value. You are going to write the assets off over the period of reimbursement under any system that you adopt. I would like to know if this is not true. If a facilities contract does not recognize any date, which will include June 10, 1940, after which construction or acquisition may start and the Army or Navy agrees to reimburse for all such expenditures, I can't conceive of any contractor not amortizing these assets, in one way or another, over the period of reimbursement, regardless of what the necessity certificate (which limits assets to those acquired after June 10, 1940) says.

CHAIRMAN MCCLUSKEY: I have great hopes that any judicial decisions that may be rendered will be on some fair basis. I do not anticipate that the government is going to make us do something that is going to work a grave injury to us when they have provided a method, written into a law, which is for the definite purpose of allowing us to take this amortization deduction in our income tax returns.

MR. SEGHERS: I would like to point out that there are five different authorities in Washington squabbling over this problem and the one that isn't recognized in the revenue statutes seems to be the one

that is causing the most trouble. The revenue statute recognizes the Navy Department, the War Department, the Treasury Department, and the Emergency Defense Commission.

In addition, O.P.A.C.S. apparently have pushed their way into it and are the ones who are throwing the monkey wrench into the granting of the non-reimbursement certificates. Anyone who wants to be convinced of that should obtain through the official mail from the Division of Price Control, David Ginsburg's talk on "The Amortization Deduction," and you will see what the radical view of amortization is in Washington.

THE AMORTIZATION PERIOD

CHAIRMAN MCCLUSKEY: Let us discuss the question of how long this amortization period can or may last.

E. H. SWETT (*Assistant Treasurer, Nashua Mfg. Co., Nashua, N. H.*): Under Section 124 of the Internal Revenue Code, the amortization period is for five years; but if the emergency is declared over by the President before the expiration of five years, you are entitled to accelerate your depreciation so that the full cost of your emergency plant facilities may be recovered within the time so designated.

CHAIRMAN MCCLUSKEY: Can a concern which is taking amortization discontinue it and resume the normal rate of depreciation? The contractor may do this. He can stop amortization, and any time he chooses, after having notified the Treasury Department, resume charging out his depreciation. But, if he does so, he cannot return to the charging of amortization of facilities, unless the President has declared the emergency ending before the sixty-month period has expired. Then he can recompute his taxes on the amortization basis.

MR. BLOCK: Assume five years have passed. In the meantime we have five-year amortization by the Revenue Department and have built up an additional plant. Would anyone like to suggest what the government would do? The plant is fully amortized; it has been written off the books, but it is still being used. It is an additional plant set up for defense work. Let us assume that we are fortunate enough to have sufficient work to keep this additional plant busy. What will the government do under those circumstances? One

reason I raised this question was that some contractors are of the opinion that it is better not to use the five-year plan at all and continue on their normal basis.

CHAIRMAN MCCLUSKEY: There is a possibility that a mistake is being made by taking amortization on the five-year basis. This is true if tax rates are higher after the five-year period is ended. All men in business have to take reasonable chances but it seems to me the best plan is to take advantage of the deduction as soon as possible.

LLOYD S. HERTZLER (*Supervisor, Property Accounts, Armstrong Cork Co., Lancaster, Pa.*): Are you taking normal depreciation on your machinery and not amortization into your costs?

MR. BLOCK: We are amortizing over the five-year period the machinery we have added since June 10 under a necessity certificate.

MR. SEGHERS: I would like to go back to a question asked in the first part of the meeting. If you are doing both defense work and civilian work using the same machines, what are the possibilities for amortization?

MR. TAYLOR: Necessity certificates have been granted where the preponderance of the output is for defense work, that is, where a sub-contractor is selling to commercial customers and also to customers who, in turn, sell to the Army and Navy. Suppose you have 100 customers. Ten of them are working solely on commercial work; the rest of them are working partly on defense and partly on commercial contracts. Those that are working partly on defense work may have 85 per cent defense work. In such a case necessity certificates have been issued. If you receive your necessity certificate, you deduct amortization. There is the difficulty of obtaining the necessary data to attach to your application for a necessity certificate. If you are selling only to jobbers who sell to manufacturers, who in turn make both commercial and defense products, the only problem is to obtain the affidavits to prove the facilities are for defense.

NORMAL DEPRECIATION IN COSTS

CARL H. GRASHOF (*Controller's Office, Eastman Kodak Co., Rochester, N. Y.*): My interpretation of this amortization problem

is that it has no definite tie-up with depreciation. In other words, we may amortize a piece of equipment over five years, but that does not write it off our books for cost purposes. We can depreciate it at our normal rates over the normal life of the equipment and merely get amortization as a tax relief for the next five years.

MR. HERTZLER: Then you only put depreciation figures in your costs, not amortization charges?

MR. GRASHOF: According to the rules, you must only do that.

MR. HERTZLER: That is what I wanted to bring out here.

CHAIRMAN McCLUSKEY: The allowance for amortization is an incentive for a business man to invest his money in facilities for defense purposes. He can only take the full allowance for amortization, however, and not both depreciation and amortization.

MR. HERTZLER: Suppose in this profit picture we were discussing, you would make available to the inspecting officer the basis on which you arrived at your cost and selling price. Would that be sufficient data to let them know the amount of your depreciation and profit?

CHAIRMAN McCLUSKEY: It seems to me that would be the only way to prove what you have in your price structure.

MR. LEEDS: That is not a supposition; it is a fact. You will have made available to the inspecting officer your previous costs. As to your selling price on a fixed-price basis, the inclusion of any item, whether you call it amortization or profit, depends largely on whether the inspecting officer from the government considers it to be a reasonable and an allowable cost item.

MR. SEGHERS: Are you referring to the examination of your tax return or examination before a non-reimbursement certificate is issued?

MR. LEEDS: I am referring to the examination you will be subject to if you have a supplies contract with the Army or Navy.

MR. SEGHERS: The manufacturer wants to get his non-reimbursement certificates right away, as soon as he gets his contract. You are speaking of the examination that takes place afterwards.

MR. LEEDS: That is correct. It is the only way they would find out whether you were including amortization as an element of cost.

MR. SEGHERS: That isn't what they are doing. The point is that they will think that your price is too high and that you must be charging too much for amortization. If this is not on the basis of an examination, then it must be on the basis of statements submitted before you will receive a non-reimbursement certificate.

CHAIRMAN MCCLUSKEY: Before a certificate of non-reimbursement is issued the Government must have some way of determining whether or not you have included any abnormal amortization or depreciation in your price.

MR. LEEDS: A certificate of non-reimbursement is a very essential document when deducting special amortization in the tax return. It is a certification that you are not being reimbursed for the same facilities either directly or indirectly, in whole or in part, by the U. S. Government. They want to know you are not getting paid for the facilities by the Government and at the same time being allowed amortization.

CHAIRMAN MCCLUSKEY: I imagine the Government will of necessity have to examine your records to determine whether or not they should issue a certificate of non-reimbursement. They will probably scrutinize very carefully the depreciation items in your cost figures.

MR. LEEDS: That is right.

AMORTIZATION AND BUSINESS PROFITS

MR. GRASHOF: If you receive a certificate of non-reimbursement, it is for the purpose of getting relief from income taxes. But if you do not make any money on the deal, of what value is the tax relief? If the company doesn't have any other sources of income against which to take the tax relief, the whole thing is absurd.

MR. COLKOS: I think you have lost sight of one fact, that you can still include normal depreciation in your supply contracts and still not be considered to have been "reimbursed."

MR. GRASHOF: If we make 20 per cent profit on a contract after normal depreciation, that might be our normal rate of profit. But certainly that 20 per cent is part of our reimbursement for putting up the money to build this equipment. Therefore, the 20 per cent profit, call it what you want, is reimbursement.

CHAIRMAN MCCLUSKEY: I think this is the problem: Suppose your ordinary rate of depreciation is 5 per cent and you give a price to the government, but include depreciation at 10 per cent. If you wish to take advantage of the amortization deduction, you ask for a necessity certificate and a certificate of non-reimbursement. When the Government examines your price setup they will see that you have included an extra 5 per cent. The chances are they will not allow you to deduct 20 per cent as amortization plus the extra 5 per cent depreciation. They will probably say you have 5 per cent included as your regular depreciation, and allow you 15 per cent additional.

MR. GRASHOF: Our position is this: We charge the normal rate of depreciation in estimating our cost and fixing our selling price, but we have never done these things before; we haven't any "normal" profit margin. Say we make 30 per cent profit on it. Is it unreasonable? Are we being reimbursed?

MR. SLAVIN: Don't you think the whole matter would be clarified if we were to consider separately the two kinds of contracts? If a bid contract is involved, I don't think there will be an investigation into prices. However, if it is a negotiated or cost plan, there will be an investigation.

EDWARD E. LEWIS (*Assistant Vice President, RCA Mfg. Co., Camden, N. J.*): I think we ought to recognize that as a final outcome we are all apt to be, and probably will be, subject to cost investigation. If, in our costs, we have included some depreciation for the facilities acquired since June 10, it would appear in so doing we have reduced the income out of that particular contract. If, in addition to that, we attempt to take as a tax deduction, an additional 20

per cent amortization, it naturally follows there has been reimbursement thereby. Hence, if we only include as normal depreciation those facilities which we have prior to June 10, and use for amortization for tax deduction purposes 20 per cent of the facilities acquired since June 10, I think we are in the clear.

CHAIRMAN McCLUSKEY: I am sorry our time is up. I want to thank you all for your contributions to this discussion, and express the hope that before we meet again next year we will have found the answer to the questions which now appear so difficult. The meeting is adjourned.

. . . The meeting adjourned at five-five o'clock . . .

APPLICATION OF OVERHEAD IN PERIODS OF ABNORMAL ACTIVITY

Chairman: CHARLES C. JAMES

Stevenson, Jordan & Harrison,
New York, N. Y.

CHAIRMAN JAMES: I shall open the session by making a few general remarks. I don't like to start off with a quotation; I would rather wind up with that procedure. But there is a paragraph in the latest *Bulletin* (*N.A.C.A. Bulletin, June 15, 1941*) that has appeared in most timely fashion, just when we need it. If you have not read it, I suggest you read the last paragraph first. I will read it to you, so you will have to take my advice:

"If you are supplying the Government with any type of material, do not fail to learn the rules of the game. The penalties are high and the return is low. To fail to give proper consideration to the problems which arise from dealings with the Government will surely leave the contractor in a vulnerable position."

Ladies and gentlemen, let me say from ripe experience in a preceding war, those are words of wisdom. You perhaps are all familiar with Senator Nye's dilemma at the time when the New Deal first landed in the saddle, and the philosophy of selling at cost plus a reasonable profit had a temporary vogue in American polity.

Senator Nye, with fine enthusiasm, sat down to write a law—there

ought to be a law that all prices should be equal to cost plus a reasonable profit. He undertook to define costs, and, finding some little difference of opinion among Government authorities, he called in some of our wisest public accountants and he asked them to define costs. He waited and he waited and he waited, and he finally gave up, and so the law was never put on the statute books because accountants and cost accountants were never able to define cost.

Of all the problems in connection with cost that need definition, the term "overhead" is perhaps the principal one. As soon as you get away from that fuzzy generality and try to tell me or anybody else what you mean when you say "overhead," you will discover that even in your own minds you are unable to formulate a clear definition. If there is anybody here who wants to take that challenge, I am going to give him the floor first.

We shall find that there are such things as direct and indirect charges for expenditures. They may be classified as to units of output, as to units of effort, as to contracts, or from some other approach.

Another basis of classification is whether an expenditure is productive or non-productive. That again is entirely a question of concept. The fundamental rule under which so-called indirect or so-called non-productive expenditures may be made is that a dollar spent for that type of service or facility should save more than a dollar of direct cost, so if there is anything in the world that should be productive it is the non-productive expenditures. Again a complete confusion of terms.

Another factor with which we have to deal in endeavoring to define cost is whether we mean ultimate cost or cost as nearly as we can determine it now. Take any one of these contracts that we are about to discuss, and you will find that your own management, the Government, and your financial requirements necessitate your making approximations of cost from month to month, but ultimate cost cannot be determined until the last dollar is spent.

In the other room a few minutes ago a man got up and asked a very wise question. He said, "Will the Government permit us to put into costs of production under Government contracts the expense of restoring our plants to the condition in which they were found when we converted them to Government use?" Everybody laughed. But we shall not get ultimate costs until expenditures of that kind are taken care of in our costs.

So again, in endeavoring to define costs, we must ask ourselves whether we are talking about costs now as we can determine them at this stage of the game, largely on the basis of estimates, or whether we are thinking of cost in the ultimate and final analysis.

Then again we have this familiar concept of normal costs, costs based on a period of time sufficiently long to iron out the ups and downs that come with cyclical and calendar variations.

I heard in the other room a few moments ago a statement made that one Government auditor insisted that the entire expenditures for so-called overhead in one month should go against the output of that month. It happens that a client I am serving now has an overhead rate representing 2500 per cent of direct labor cost. If we charged into the cost of the output for the current month the ratio of overhead to direct labor, we would produce a cost that is somewhere around 25 times the price. And yet such absurdities as those will creep into our thinking if we are not careful in our definition of what we are talking about when we discuss this subject of overhead.

I am going to this length in this introduction in order to urge you not to use general terms like "overhead," but to get right down and define what you are talking about in everything you say so that all of us can comprehend what you mean.

You all have a copy of the outline. We do not need to follow it exactly; it is merely intended to suggest the general area which we hope to cover. Who has the first question?

F. RICHMOND FLETCHER (*Partner, McKinsey & Co., Boston, Mass.*): Would it help in this discussion if we were to use the word "burden" instead of "overhead"?

CHAIRMAN JAMES: Try to define "burden," and then we will decide.

MR. FLETCHER: I don't know how good a job I can do defining burden, but it does seem to me that this discussion relates more to what we commonly term burden than it does to overhead. Starting with that premise, and referring to Point 1 on the outline, actual versus predetermined burden rates, it seems to me that we are likely at this session and others of a similar nature, as well as in chapter meetings during this "defense" period, to be somewhat overcome by the condition in which we find ourselves today.

DISCUSSION OUTLINE

APPLICATION OF OVERHEAD IN PERIODS
OF ABNORMAL ACTIVITY

- I. ACTUAL VS. PREDETERMINED OVERHEAD RATES
 - A. Need for adjusting to actual for government contracts.
 - II. BASIS FOR RATES—NORMAL CAPACITY OR EXPECTED VOLUME
 - III. THE OVERHEAD BUDGET
 - A. Expenses whose classification varies under normal conditions.
 - 1. So-called "material overhead"; freight-in, purchasing, receiving, inspecting, storing, issuing, etc.
 - 2. So-called "labor overhead"; social security taxes, personnel dept., workmen's compensation, insurance, etc.
 - 3. Other borderline costs often included in overhead.
 - B. Expenses arising from present abnormal conditions
 - 1. Overtime premiums paid direct and indirect labor.
 - 2. Night shift premiums.
 - 3. Cost of training programs.
 - 4. Accelerated depreciation on present plant.
 - 5. Amortization of defense facilities.
 - 6. Other added costs.
 - IV. THE NORMAL CAPACITY CONCEPT
 - A. Definition of terms.
 - B. How is normal determined?
 - C. Disposition of over- and under-absorbed burden.
 - V. WHAT IS NORMAL CAPACITY TODAY?
 - A. Assume no added capacity but increased utilization of former capacity.
 - B. Effect on prices and inventory valuation of an increase in normal capacity.
 - C. Disposition of large over-absorbed balance.
 - D. Effect of present increase in capacity and reduction in rates on post-war conditions.
 - VI. ADJUSTING OVERHEAD AT NORMAL TO ACTUAL FOR GOVERNMENT CONTRACTS
 - A. Exclusion of costs directly chargeable to government contracts.
 - B. Exclusion of unallowable costs.
 - C. Treatment of over- and under-absorbed overhead.
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I am reminded, in the discussions which have arisen during the last two sessions I have attended, of a situation which arose at the time Mr. Du Brul was Secretary of the National Machine Tool Builders Association and trying to evolve a uniform cost practice for the

industry. At that time, shortly after the war, machine tool builders were still very busy, they had been working night shifts and Sundays, and the question of normal capacity was similar to that we are facing today.

There was a great deal of very intense discussion in an effort to determine a normal operating capacity upon which normal burden rates should be established. Most of the manufacturers had been working overtime, and thought that normal should be 110, 120 and 150 per cent of a single shift maximum capacity. Mr. Du Brul got somewhat worried and made a careful research, going back in his investigation for a period of ten years in all member company records. As a result he found out that over a period of ten years the normal operating capacity of that group had actually been 60 per cent of the maximum.

We have talked about accelerated depreciation due to abnormal production in the session before this meeting started, and I am a bit worried lest we confuse abnormal with normal. It seems to me that we are likely to overlook what is going to happen after this particular period of stress. In our discussions we must think searchingly about this "normal," and in our burden development we must realize that we have a condition today which is abnormal. Our cost accounting, through variances from standard, should reflect the results of the abnormal, so why should we depart from normal? I would like to start discussions on that premise.

CHAIRMAN JAMES: Thank you very much, Mr. Fletcher. That is a splendid start, and I am sure we are going to carry it right along.

GEORGE J. ARMSTRONG (*Supervisor of Costs, General Fire Extinguisher Co., Providence, R. I.*): During this period of abnormal activity we are putting up a number of temporary buildings, making additions to shops, acquiring temporary equipment, etc., which after this emergency is over may never be used again. Under ordinary circumstances we might assume the normal life of this equipment to be 7½ years, a building 20 years, etc.

No one can anticipate how long this present abnormal period will last. Therefore, it seems to me that the establishment of rates, procedures, etc., so that we can recover these abnormal expenditures for capital assets through our costs within this period, becomes a very important part of our question.

CHAIRMAN JAMES: Would it contribute anything to your views on the subject if I added this suggestion, that for the purpose of accounting under present-day conditions, we ought to get into our minds the concept that money spent on so-called assets represents money spent for deferred operating costs, and unless those expenditures are all charged off over operations that they make possible, we shall find ourselves, not with assets at the end of the time representative of the amounts we have stated on our books, but physical liabilities representing debits on the books. Is that a workable concept in your mind?

Well, let's take up that question of normal capacity. Dr. Marple tells me that a research study now in process shows that 154 out of 251 companies which replied to the question were continuing to use normal capacity as a basis upon which to assign indirect charges to cost of products.

Let me ask for an expression of opinion from those who are giving this subject what I might call fresh and independent thought, whether or not in your judgment that represents merely following the line of least resistance because you are accustomed to doing it that way, or has the subject been thought out. Does it represent a considered conclusion that we should continue to use the normal capacity basis, and pick up the difference between what is absorbed on that basis and what is occasioned by the extraordinary activity of the present as a part of the cost of the extraordinary production of the present?

FRANK L. SWEETSER (*Partner, Stevenson, Jordan & Harrison, New York, N. Y.*): I think that is entering the field of conjecture. You had better stick to normal. These extra expenditures can be handled readily as you wish without disturbing the accounting structure. I think that is precisely what Mr. Fletcher was saying, and I agree with him 100 per cent. We are in a changing world. It is going to change over and over and over again. It is impossible to keep up with all of these changes.

The old idea of charging the overhead or burden of last month into the operations of this month to get a cost seems preposterous to me. I think you must follow your normal setup. As Mr. Fletcher has said, instead of actually being 120 or 150 per cent of single shift capacity, because current conditions were that way, it worked out in the machine tool industry that it was about 60 per cent of single shift capacity. We all know that this is more likely to be the basis

on which you can make comparisons and build your structure. Whatever else happens outside of that normal, put the variances where they belong when you need them there, and when you are through, you are through.

CHAIRMAN JAMES: Thank you, Mr. Sweetser. Bill Keating, you have had a lot of study on this subject. Tell me what you think about it.

WILLIAM L. KEATING (*Partner, Miller, Donaldson & Co., New York, N. Y.*): My easiest answer, but at the same time my most sincere answer, is that I agree exactly with Mr. Fletcher and Mr. Sweetser.

CHAIRMAN JAMES: I would like to hear some disagreement with these national authorities.

GEORGE R. DELEARIE (*Treasurer, Westfield Mfg. Co., Westfield, Mass.*): I agree with what has been said. I think management wants to know what these extraordinary items are so that they can tell what is arising from defense work and determine what is extraordinary, and is outside the regular, normal operations.

HOWARD A. GIDDINGS (*Staff, Leach, Rindfleisch & Scott, Richmond, Va.*): If a firm continues to produce the articles which it has been accustomed to produce in its usual line of manufacture, and in addition, takes on some new lines, it should continue to spread depreciation on its normal operations according to its accustomed rate, and then any equipment purchased solely for the new operations would be depreciated on as rapid a rate as possible in order to absorb it over what we might estimate to be its useful life. Is that the point of these statements?

CHAIRMAN JAMES: I would like Mr. Fletcher to discuss that specific application.

MR. FLETCHER: I think that in all our cost accounting on defense contracts we should not depart radically from our normal procedure. We must set up in our accounting structure accounts which will properly define these extra charges, determine what they are caused

by and, through our customary budgetary procedure, be able to show the results of abnormal operations by elements of expense, and by volume of production broken down by departments, if you please.

Now, under this abnormal situation, we are going to have a lot of extra charges and extra production. It means that we, as cost accountants, must explain them, but I don't believe that we have to change our customary practice to do that. I don't believe that we should change our depreciation rates or our standard costs just so long as our variances from standard clearly express results and causes. We have always had variances from standard to explain to management and I think we are able to satisfactorily explain abnormal results without having to change our practice.

CHAIRMAN JAMES: Thank you, Mr. Fletcher. May I suggest that we proceed to Item III and take a look at the six items under B, "Expenses arising from present abnormal conditions." Suppose we make a practical application of what has been suggested here, which is that you continue to follow present routine, if you may call it such. Ask yourselves the question whether or not, having done so, you will deal with these items under B as additional charges applicable to current product or as overhead variations deductible from profit and loss.

DONALD M. SHAWEN (*Assistant Secretary-Treasurer, Buckeye Traction Ditcher Co., Findlay, Ohio*): Mr. Fletcher brought out that he didn't think, under present conditions, we should accelerate our depreciation rate or do other things which might change our rates of burden absorption; in other words, continue as we have budgeted our program.

Back in 1932, 1933 and 1934, all of the large automobile companies and almost every company of any size in this country changed their depreciation rates because of subnormal activities. Beyond any doubt some of the best minds in accounting took into consideration the activity factors that were involved at that time. I can see no reason why the accountants should not as a group realize that conditions are changing. Even though we have considered something to be at normal previously, if at one time some of the best minds thought it wise to reduce rates because of subnormal activity, why shouldn't we again increase rates because of abnormal activity?

MR. FLETCHER: I don't know whether that question is directed at me or not, but I am not in a position where I would attempt to tell you not to change any of your standards or any of your rates. I think you should do as you normally would. Some of your standards may have to be changed—it may be right to change them now—but if you are sure in your own mind that your depreciation rates are correct on a normal basis and over a normal period of time, I would question whether you would want to accelerate your depreciation.

I think that each of us has an individual problem, and I don't like the thought that we as a group are going to change our standards because we are facing an unusual situation which we know is not permanent.

We have gone a long way in developing and maintaining cost standards, in developing budgetary procedure, and in the use of variances from standards, and I think we need to be very cautious in considering radical changes from previous practice.

Today, we have a volume of business that we haven't had since the last war, perhaps in excess of that volume. We can't move our prices too fast, nor can we move normal costs because of temporary abnormal conditions without revamping all of our cost standards. It is caution that I am trying to emphasize rather than a question of the economic right of acceleration of depreciation and the revising of all other affected charges.

CHAIRMAN JAMES: Now may I ask that you give some consideration to the extraordinary items that are listed here. Are they includable in overhead? That is to say, is the overtime premium paid direct labor an item of overhead or is it a part of direct labor cost? Again, is the night shift premium a part of overhead or is it a part of direct labor cost?

We are perforce considering only overhead; let's not get into an argument on whether or not these things are in overhead except so far as a mere statement of your opinion. But assuming that there are certain of these items at least which are extraordinary and are to be included in overhead, how shall they be dealt with—as part of the cost of production, or as overhead variances deductible from profits? I would like to ask that specific question. I think it is important.

MR. DELEARIE: It seems to me that extraordinary items, such as overtime and night shift bonuses, where you really can't clearly decide

that the overtime or bonus was due to defense work or to your normal commercial work, can best be put in your overhead and prorated over your defense work and your normal commercial work. That would eliminate, I should think, any argument with the Government auditors when they came in.

Of course, anything that can be definitely allocated against either commercial work or defense work should be put in the direct costs. I think if you did that we would probably run into less trouble when the Government auditors come in to check our records.

CHAIRMAN JAMES: I would like you to assure me that I understand your idea correctly. Is it your thought that as a matter of policy it is best to endeavor to keep our books in such fashion that the auditors cannot find fault with them, as against the opposite, which is to keep them the way we think they ought to be kept, whether the Government likes it or not?

MR. DELEARIE: The point I mean to bring out is that it is difficult to determine whether that overtime or that night shift premium was due to commercial work or to defense work.

CHAIRMAN JAMES: You have not answered my question. You indicated that you are anxious to keep your books so that the Government couldn't find any fault with them—they would just accept them as written. Do you think that is wise policy, or do you think that they ought to be kept the way you think they should be kept, knowing you are probably going to have an argument with the Government auditor?

MR. DELEARIE: Keep them the way you think they should be kept. But I do think on any controversial items of this nature, like an extraordinary overtime or bonus, where you can't decide just what work it is applicable to, we should put it in overhead and prorate it in that way. I think that would be a matter of expediency.

ARTHUR T. CAMERON (*Partner, Edward P. Moxey & Co., Philadelphia, Pa.*): It seems to me that we color our reasoning by the requirements of so-called Government activity rather than sound accounting principles. As a matter of fact, if you pay overtime and it is specifically applicable to a certain kind of work—I don't care

whether it is commercial work or government work—rather than throw it into the common soup pot and ladle it out by some predetermined method, it would be much better to put your overtime pay directly where the wages which you normally would have paid would have followed to that particular point. I don't see that we obtain any better basis to work on by dumping it into the overhead and then farming it out on some disputable basis, for the funds naturally follow along the line of the direct payments.

CHAIRMAN JAMES: What you are implying is that it is a good rule to assign directly as far as you can and prorate only those things which you cannot assign directly. Is that right?

MR. CAMERON: That is correct.

MR. GIDDINGS: I agree entirely with Mr. Cameron. I think that is logical from an accountant's point of view, and I think it is the expedient thing to do from the point of view of dealing with the Government.

HOMER W. STANHOPE (*Cost Accountant, Anheuser-Busch, Inc., St. Louis, Mo.*): I agree in general with the viewpoint of allocating overtime on the basis of direct labor where possible. There are instances, however, where it isn't practical. To illustrate, a plant is doing both commercial work and Government work, and the point is raised that the management might do the commercial work at overtime rates and the defense work during the regular working hours, or vice versa. They are not justified in charging the overtime premium direct to the job on which the overtime was worked because it was no more responsible for it than the job which management decided to schedule for working hours. The question was settled in this instance by charging the overtime premiums to overhead where it is applied to both. These are circumstances which would change the application.

MR. FLETCHER: I would like to interject a question here. As I understand it, we are discussing overtime premiums paid, not overtime work, and it seems to me that we must separate overtime premiums from overtime labor. Overtime labor is something we can count and apply properly to cost in hours. The overtime premiums

are a different breed, and I feel that they should be charged to burden as an added over-all charge and not included as a cost of direct labor.

CHAIRMAN JAMES: As I understand Mr. Stanhope, he contends that inasmuch as it is impractical to do either of the two classes of work strictly during regular hours, it is logical to charge the overtime premiums to overhead, where they will be apportioned between commercial work and Government work on the basis of the total hours on each. Am I correct?

MR. STANHOPE: That is right.

CHAIRMAN JAMES: Which in effect, is what Mr. Fletcher was saying. If you are going to apportion it over all of the activities, why not apportion it as an element of overhead?

OSCAR J. HELD (*Chief Clerk, the Lunkenheimer Co., Cincinnati, Ohio*): If you were to treat overtime premium as a direct element of cost, as such, would you apply burden to such amounts? If not, would it be practicable to segregate the premium and handle it as a non-burden bearing item of cost? That, I think, is an interesting point.

It is my contention that overtime premium, or any premium, for that matter, should not be subject to the application of burden. Why? Simply because such items, in themselves, have no relationship to supervision, indirect labor, floor area, depreciation, or virtually any other form of expense from which burden rates are derived.

GEORGE L. NOHE (*Partner, O. F. Taylor & Co., New York, N. Y.*): I would like to add to that question. When charging all direct labor including the overtime premium to a specific job, do you use the regular rate for fixed burden or is a lower rate used? The point that I have in mind is that in some cases it has been found that the premium on overtime is offset by the over-absorption of fixed charges resulting from the increased volume of production.

CHAIRMAN JAMES: Let me see if I understand that. Do you mean that because increased volume tends to over-absorb burden, it should be considered an offset against the expense of paying overtime premiums?

MR. NOHE: No, I don't mean quite that. Let us take for example a job on which the work is performed at night or on Saturday. Under the method outlined by a previous speaker, this job would be charged directly with the premium paid for overtime labor. The labor cost of this job will be higher than it would have been if the work had been performed during the regular working hours. As a result of the increase in the volume of production, which presumably has forced overtime work, the normal rate for fixed burden is found to be high and we have over-absorbed the fixed burden charges. My question is, would this job be charged with burden at the normal rate, thereby further inflating its cost, or would a lower rate be used?

CHAIRMAN JAMES: That is a very interesting question.

MR. DELEARIE: In our particular case, we build up our budget on a normal labor basis, and in applying our overhead we naturally eliminate any overtime premiums and apply the overhead rates to the normal labor only. In other words, the overhead rates would not be applied on the overtime.

MR. NOHE: What you are saying is that the overtime premium is being handled as overhead.

CHAIRMAN JAMES: That is what he is saying in effect, as I understand it.

RAYMOND P. MARPLE (*Director, Research and Technical Service Dept., N.A.C.A., New York, N. Y.*): I believe there is some information in our recent research study that bears on this question. Included in this group were 54 companies which use job costs and treat overtime payment on direct labor as part of the direct labor cost. Of those 54 companies, 32 or 60 per cent apply overhead on the basis of actual direct labor cost. In other words, in adding 50 per cent more to their direct labor cost for overtime, they are also adding 50 per cent additional burden to those jobs. Those jobs are not only penalized because they happened to be the jobs worked on during overtime periods, but they are also being charged an added amount for burden.

CHAIRMAN JAMES: That answers the gentleman's question very effectively. It indicates a rather widespread practice to do just that.

CLAUDE O. RAINEY (*Accountant, Trico Products Corp., Buffalo, N. Y.*): It is false distribution of overhead. He has no business distributing overhead on a dollar basis.

CHAIRMAN JAMES: That is one gentleman's opinion.

WILLIAM BLACKIE (*Controller, Caterpillar Tractor Co., Peoria, Ill.*): Let me cut in on Dr. Marple's point. The basis used for the distribution of direct labor overtime seems to me to depend on the size of the job. If a company is regularly working 48 hours a week, paying a premium on eight hours and building a ship or submarine or other large job, then the overtime premium may be readily applied as direct labor cost; but if the company is engaged on relatively small jobs, turning them out so many an hour or day, the overtime premium cannot, as a practical matter, be attributed to any one particular job and must be treated as an over-all cost.

Why do we pay the overtime premium? We pay it because we don't have the available man power to do the job within the regular work hours. The premium on direct labor is, therefore, direct labor cost and should be so treated except where adherence to sound theory and practice must be modified to meet the expediciencies of practical accounting.

CHAIRMAN JAMES: Thank you, Mr. Blackie. Maybe that will tend to clear up the variance in practice on that point that was developed by the research study. Of 263 replies, 99 indicated that they were charging overtime premiums to direct labor, 154 or 58 per cent were charging it to overhead, and 10 were charging it to a variance account.

This is an interesting cross section of practice. The variation in practice is undoubtedly explained by the point Mr. Blackie made.

R. F. BEAVEN (*Factory Accountant, The Mengel Co., Louisville, Ky.*): We go a little further than these discussions have gone. We determine what is direct labor and what is indirect labor and we figure premiums on each of these separately. We have estimated what overtime on direct labor is going to be and we include it in our price, but we charge it to a labor variance account. Premium on indirect labor is treated as burden. Our standard cost is figured on standard labor.

CHAIRMAN JAMES: And you determine your prices from your costs?

MR. BEAVEN: We determine our prices from standard but include in the standard our estimate of the premium which we will pay direct labor.

MR. RAINEY: In this whole discussion, it seems to me that each person is looking at it from the viewpoint of his own company. In some businesses you can do one thing and in some you can do another.

I would like to have you justify the charging of overtime premium to burden in the following situation. Suppose you have a diversified business—pressed steel or punch press or screw machine, etc.—and you are rushing only one particular line of products to the point where overtime is required. At the same time you are manufacturing defense items which require overtime consistently. Here you have a condition where only a small proportion of your own products require overtime as against required overtime on your entire defense work. It seems improper distribution to throw the overtime cost of these two items into overhead and prorate it over products that are not involved. All of this overtime problem is not just a development of the last few weeks or months. We have had it and have been paying it for years, and have charged it to direct labor.

CHAIRMAN JAMES: I think Mr. Rainey has raised an excellent point. I would like to hear an expression of opinion on it.

FRANCIS E. SWISHER (*Chief Accountant, Dennison Mfg. Co., Framingham, Mass.*): Where overtime premiums are included in overhead, do you charge the normal burden in figuring cost? If so, when your hours have gone up you are going to over-absorb and have a gain variance. In case of government contracts where it is necessary to get an actual cost, you will offset the gain in overhead against the premium on overtime.

CHAIRMAN JAMES: That was, in effect, the point that was made a little while ago.

MR. GIDDINGS: I think the gentlemen have raised a question which goes right to the heart of the subject. I am just wondering

if we don't frequently get a little panicky when a new situation comes up, and try to modify our accounting treatment in order to deal with something that is different only in application and not in fundamentals. I can't see that this overtime bonus or premium paid for overtime or night shift work is in any sense an overhead item. I think it is directly applicable to the job, and I don't see that there is any difficulty in treating such overtime as direct labor and at the same time avoiding an objection that was brought up a few minutes ago, of including it as a basis for distribution of overhead. If we operate on a job basis, we presumably do not make numerous little items which are too small to compute on a job; otherwise we wouldn't use a job method but would change over to process or some other such method. If we are on a job method, we are running various jobs, each significant as a unit for costing.

As to the matter of apportioning the overhead, it would seem that regardless of the extent of overtime work, direct labor should be the basis. If you have been using the direct labor hours basis, "hours" is still the factor when working overtime. If we wish to use a direct labor cost basis, we could still consider that overtime is direct labor without any confusion. We will then have *two* kinds of direct labor: *regular* direct labor and *overtime* or *bonus* direct labor. The "regular" direct labor includes *all* the direct labor worked at regular rates. The "overtime" or "bonus" direct labor includes only the *additional compensation* paid on the extra hours, night shift, etc. These two kinds of direct labor are compiled separately. The overhead is distributed on the basis of the "regular" direct labor only, but both the "regular" and the "overtime" or "bonus" direct labor is charged as direct cost to the job. Thus we have more accurate costs and also avoid error in distributing our overhead.

CHAIRMAN JAMES: In view of the active participation in the discussion, let me just for a moment endeavor to crystallize what seems to me to be the conclusions that have been reached by you gentlemen in what you have said on this subject.

The problems presented by Mr. Rainey and the solution that has been advanced by Mr. Giddings, it seems to me, can be crystallized in this fashion: In distributing overhead in this period of abnormal activity, we may very appropriately start from the basis that we shall continue to deal with each problem, first, in accordance with what our normal procedure has been, and then, when we find from an

analysis of the particular problem at hand that it is going to give us a distorted result in any one contract or any one item of product, we shall have to modify that customary procedure in order to correct the error that our analysis has disclosed.

MR. DELEARIE: I think some of the confusion arising here is due to the fact that some are thinking of standard costs and others of job costs. I agree with you that under job costs you should let the chips fall where they may, and apply the overhead on your actual labor hours or on labor cost without the overtime in it. But in using standard costs, if you apply your overhead on your actual labor plus your overtime, you are going to have something in your inventory that you won't get out. I think there is the whole problem. I think some of us are thinking from a job cost angle and others from a standard cost angle—and it makes a difference.

MR. SWEETSER: I would like to know how many men are thinking of job costs and how many are thinking of standard costs?

CHAIRMAN JAMES: How many of you gentlemen who have been talking have been referring to standard costs? Will you raise your hands? (6) How many of you have been referring to actual job costs? (1)

MR. SWISHER: Even in a job cost system, isn't it necessary to allocate fixed expenses and joint expenses in order to get an average cost to apply over each job? While it is management's job, perhaps, to pick which job we run on overtime and which we will be running during the day, I dare say if management would pick a Government job to run overtime, they would run into trouble if they didn't spread their overtime over all jobs.

MR. CAMERON: Is it possible for you to conceive of a situation where you decide which jobs you are going to run? Don't you run the jobs you have to run day and night to get them completed, if there is a priority on them? It seems to me that we are trying to reason that we will only do certain kinds of jobs on overtime and other kinds of jobs on regular time, when, as a matter of fact, what we do is to start a job and push it through whether on regular time or overtime. We don't make a distinction between them,

Another point I think you should keep in mind is that there are such things as standard job costs. Don't forget that.

MR. BLACKIE: Let's get away from this matter of overtime for a minute.

We are faced today, in industry, with the prospect of price control and I think we might give some consideration to the question of whether or not the "freezing" of, or the setting of a "ceiling" on, selling prices has an effect on the setting of standards for costs.

CHAIRMAN JAMES: Will you make that a little clearer?

MR. BLACKIE: Selling price ceilings are apparently going to be fixed at prices somewhat lower than would, presumably, otherwise prevail—at levels passed somewhere on the upgrade in the business cycle. But, if all or any of the components of cost are left free to move upward without restriction, the limitation placed upon selling prices disturbs whatever relationship there may normally be between costs and selling prices.

In the automobile industry, to take a typical example, I wonder if there aren't reasonable grounds for considering that the cost elements might be frozen in the standards at the costs prevailing when the price levels now established as "ceilings" by Mr. Leon Henderson's O.P.A.C.S. were deemed commensurate with the cost?

JESSE G. KLINE (*Accountant, Atlantic Refining Co., Philadelphia, Pa.*): I would like to follow that through with an example of what a small refiner might be up against. If his costs, such as crude at the well, marine rates and processing labor are not frozen with the selling price, he may find himself in the position of having costs considerably in excess of his frozen selling price. Thus, if selling prices are not predicated upon corresponding costs, many a business, both large and small, may find itself hopelessly lost.

CHAIRMAN JAMES: Let me see if I understand your point. Are you saying in effect that the Government is going to establish certain prices and then not permit you to put into costs more than an amount equal to those prices by excluding certain elements of cost in order to keep the total of your costs within their price range?

MR. BLACKIE: No. I particularly avoided a defense product when I selected the automobile. There is no question of permission. The Government will have no interest in how a pleasure automobile is costed and the problem is one which concerns only the industry itself. I think Mr. Kline gave a very specific illustration of just what I have in mind.

It is probably entirely illogical that a selling price should be fixed without any limitation being placed on the costs of the component labor and material, but that is the present status of price control. Whether the authorities that be will follow through and recognize the component elements in the finished product remains to be seen, but in the meantime I am wondering if industry should not consider the possibility that an increase in costs which, by Federal prohibition, cannot be reflected in an increase in selling prices does not represent an addition to inventory value.

CHAIRMAN JAMES: The question, as I understand it, is: If our costs exceed our prices, what are we going to do with the excess?

MR. DELEARIE: I don't think you should carry a product in the inventory at twenty-five cents when you can sell it for only twenty cents. There may come a day when you will be able to carry it for twenty-five, but I don't think it would be conservative to use an inventory value in excess of selling price.

ROBERT W. PEDEN (*Supervisor of Standards, Bundy Tubing Co., Detroit, Mich.*): I have one or two thoughts on this problem. Under Section B, it seems to me that there should be a distinction between night shift premiums and overtime premiums. In our business, basic units normally operate three eight-hour shifts. That is the normal condition, not only in our industry but in many other industries. The men who work on the second and third shifts receive five cents an hour more. We take that into account in the calculation of our normal direct labor rates, based on machine hours, and if there is any excess it is taken as a direct labor rate variance.

We have just signed a contract with the union agreeing to pay eight cents an hour more all through the organization. It seems to me that in view of that situation we are justified in adhering to our earlier conception, that we are operating a current standard cost system, and at the end of this fiscal year, which is rapidly approaching, we are

going to adopt new basic direct labor rates and burden rates adjusted to the new conditions.

CHAIRMAN JAMES: You are going to modify your overhead rates to make them fit the abnormal conditions that exist today? You are not in agreement with Mr. Fletcher and Mr. Sweetser that that should not be done?

MR. PEDEN: I don't believe in taking all of these overtime premiums into our normal rate structure. I am not talking particularly about the direct labor.

MAX M. MONROE (*Divisional Controller, The Inland Mfg. Division, General Motors Corp., Dayton, Ohio*): The factor which should determine the adequacy of normal overhead rates in defense accounting is that the conditions brought about by the defense program are not normal. They are not only abnormal but they are not permanent. They are temporary, nobody knows how temporary. It should also be borne in mind that every effort should be made to establish costs on a basis that will stand up under attack when the program has been completed and when possibly a subsequent administration may attempt to discredit what has been done.

There are two general types of defense work. There is the type which may be entirely foreign to the manufacturer's line of production and which involves the erection of factories and the acquisition of machinery and equipment not needed for or appropriate for the commercial line. Then there is the other type—production which can be fitted in with the normal commercial line. In between there is the type which may utilize some commercial equipment and also require some special equipment.

The degree to which normal operations are disturbed by defense work should determine the method of accounting for them. Where the project is a large one of a special type and it is possible to allocate all the costs to the project, that should be done, even to setting up complete separate organizations including accounting, purchasing, material control, personnel, etc. On the other hand, if the defense work is of such a nature as to fit in with the regular line of production and does not present any problems that are different from standard commercial jobs, the normal method of applying overhead may be satisfactory. Wherever possible it appears desirable to segregate

defense costs in so far as practical by use of separate burden centers.

The matter of the allocation of overtime to specific jobs depends on circumstances. Usually the job that is run during regular hours doesn't cost any less than the job run at night. It is merely an accident of scheduling which may result in overtime.

CHAIRMAN JAMES: Thank you, Mr. Monroe. With Mr. Monroe's very valuable contribution, we will call the meeting adjourned.

. . . The meeting adjourned at five o'clock . . .

SESSION V

INDUSTRIAL ACCOUNTING PROBLEMS
ARISING FROM CURRENT TAX LAWS

THURSDAY MORNING, JUNE 26, 1941

FRANK KLEIN, Budget Director, Worthington Pump & Machinery
Corp., Harrison, N. J., *Chairman*

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PAUL D. SEGHERS, who received his B.C.S. degree from Southeastern University, is a Certified Public Accountant of Illinois and New York. Since 1922 he has given most of his time to Federal tax practice and is at present Tax Consultant and Accountant with Barrow, Wade, Guthrie & Co. Mr. Seghers served at one time as Associate Editor of the Prentice-Hall Federal Tax Service and is author of numerous tax articles and series in various publications, including the *Boston News Bureau*, *The Tax Magazine*, and *Forbes*. Mr. Seghers is a member of the N.A.C.A., the American Institute of Accountants, the New York Society of C.P.A.'s and the Insurance Accountants' Association, and is President and Founder of the Federal Tax Forum.

INDUSTRIAL ACCOUNTING PROBLEMS ARISING FROM CURRENT TAX LAWS

CHAIRMAN McCULLY: Each morning it is increasingly difficult for me to open these meetings. It probably is out of place to mention such matters in a technical session, but the feeling that I have this morning is that a very close association and friendship which it has been my privilege to have during these ten months is going to be interrupted in that unforecastable future which we are entering now. I want you people to know that the organizing of these meetings has been a tremendous job done by three of the finest men with whom it was ever anyone's privilege to work.

The two men, members of the Program Committee, whom it has been my privilege to present to you and the third member whom it is going to be my privilege to present this morning have worked ten months in organizing this program. They have worked hard. It has been my good fortune to associate with these men by doing a very small share of the work in connection with this program. Out of that association, I have received a reward that is entirely unearned.

The man whom I am going to present to you this morning is a member and a Past President of the New York Chapter—a man whom I am told didn't know, when he became President, that that Chapter was too big to win a Stevenson Trophy; so he went out and did it. This man has had a prominent part in the work of this Association. He has taken part in many of its technical programs.

It is with real pleasure that I turn this meeting over to Frank Klein, a man who has given freely of his time in organizing this program in a very busy period. Mr. Klein is a newly elected member of the National Board of our Association. His business, to which he must have given some time when he wasn't working on this program, is that of Budget Director of the Worthington Pump & Machinery Corporation, of Harrison, N. J. Frank, the meeting is yours.

CHAIRMAN KLEIN: Don't let Mr. McCully mislead you about the amount of work that we fellows did. The real work has been done by the speakers. We have a treat in store for us today. I have

had a chance to see the paper that is going to be presented this morning and I think you will agree with me after you have heard it that there has been a tremendous amount of work in compiling that presentation.

Recent years have seen the development of many new sources of federal and state taxes. Excess profits, social security, gross income, occupation and use tax laws are reminders of the ingenuity of our legislators in finding new methods for increasing the public revenues. With the enactment of each new tax law there is a twofold responsibility; first, the responsibility of the tax specialist for determining the requirements of the law, and, second, the responsibility of the industrial accountant for providing for the accumulation of the information or data to meet the reporting requirements. It is this second aspect of the taxation problem with which we are concerned this morning—one which is usually neglected in any discussion of new tax enactments. We are, therefore, going to treat not only with a subject of timely importance to every industrial and public accountant, but with one on which there has been little concentration of thought in the past, at least so far as published literature is concerned.

Our speaker is eminently qualified to discuss this subject, because he has devoted about twenty years to taxation problems. He is a C.P.A. of Illinois and New York; he has a B.C.S. degree from Southeastern University and is a member of our Association, the American Institute of Accountants, the New York State Society of Certified Public Accountants, the Insurance Accountants Association, and is President and founder of the Federal Tax Forum. He previously served as Associate Editor of Prentice-Hall's Federal Tax Service, and is at present Tax Consultant and Accountant with Barrow, Wade, Guthrie & Company.

I have great pleasure in introducing Mr. Paul D. Seghers, who will address you on "Industrial Accounting Problems Arising from Current Tax Laws."

INDUSTRIAL ACCOUNTING PROBLEMS ARISING
FROM CURRENT TAX LAWS

PAUL D. SEGHERS

Tax Consultant and Accountant,
Barrow, Wade, Guthrie & Co.,
New York, N. Y.

I WANT to express my appreciation of the kind words that have been said of me. I am going to pass on to you my thanks and appreciation for your attendance here this morning. You are the ones for whom we are working and who make the Association and this interchange of information possible.

Today, I am going to speak of problems rather than solutions. I have been given a very large subject to cover, and I feel that what we can do best is to analyze these problems, to study them just as we would, either in preparing to pass an examination or in meeting the much more severe examination of life; to study the problem and to realize what actually is the problem constitutes the first and most important step in the solution.

If this talk deals principally with the analysis of the accounting *problems* arising from current tax laws, and only incidentally offers suggestions for the solution of some of these problems, it is hoped, nevertheless, that a useful purpose will be served. In the discussion period to follow, those who have questions in regard to any specific problems, and especially those who are able to make helpful suggestions regarding means of solving any problems coming within the scope of this subject, are urged to give those present the benefit of their views and questions.

During the past quarter of a century, the demands upon the accountant and upon accounting records arising out of the requirements of tax returns of every kind have influenced accounting practice and procedure in two principal directions:

1. Changes in accounting procedure and in methods of presenting certain facts in financial statements to conform to tax standards, and
2. Increased detail in accounts, including the preparation and preservation by the internal accounting staff of more and more detailed analyses of all significant facts recorded upon the books,

Four General Objectives

The impact of current tax laws upon actual accounting procedure is reflected in the design and maintenance of records having four general objectives in addition to the primary purposes for which financial records are kept. These four objectives will be mentioned in the order of their importance, rather than in what might be considered their chronological order:

1. To provide data upon which certain business policies may be determined, in view of applicable tax laws.
2. To supply the necessary information for the preparation of tax returns, including the requisite data as to assets located and business done within different states, for use (if found advantageous) in the preparation of state tax returns on a separate accounting basis rather than by the use of apportionment formulae (where not prohibited by state tax law).
3. To furnish, when and if needed, support for figures shown in tax returns already filed, and likewise to make available, for possible use in connection with the preparation of returns for subsequent years, detailed information concerning operations of prior years.
4. To determine the amount to be deducted from payments to certain classes of payees on account of taxes withheld at source.

Obviously, it would be impossible to enumerate, even under very general headings, every type of information for which special provision in the accounting records might be needed in connection with all the various types of taxes and tax returns, federal and state, which a corporation may have to cope with during the course of a single year. Likewise, the alluring temptation to speak of the current trend of tax laws and their interpretation, their effect upon the public economy and the defense program, and the part which accountants, both private and public, are called upon to play in administering these laws, must be sternly resisted in order to adhere to the assigned topic and allotted time. Therefore, this discussion will be confined to the principles which are to be kept in mind by the industrial accountant in endeavoring to accomplish each of the foregoing objectives, together with a consideration of some typical problems under each heading.

The viewpoint and the problems of the internal accountant em-

ployed in an industrial corporation will be presented, rather than those of the public accountant or tax practitioner. In other words, our principal study will relate to the *recording* of facts rather than their presentation and interpretation in the form of financial statements. Likewise, we will consider the problems in connection with such record-keeping arising out of current tax laws, and not technical tax problems, rulings and decisions.

DATA FOR DETERMINING BUSINESS POLICY

Tax Accruals

The important part played by an efficient budget system in formulating tax policies is immediately apparent. On the other hand, in this era of extremely high taxes, the accuracy of the estimates of tax accruals may have a very material bearing upon the dependence which may be placed upon any operating or financial budget in determining business policies.

It is not sufficient to record upon the books all accruals based upon existing tax laws—today the failure to reflect, not only in the budget, but also in the interim financial statements, the probable tax liability under proposed but not yet enacted tax laws such as the pending 1941 Federal tax legislation, may be misleading to the public and to labor, and even to management despite its awareness of the impending burden. For instance, quarterly earning statements which have been published this year, showing earnings after setting aside tax reserves based merely on the 1940 rates, are open to two serious objections. Stockholders may be misled into believing that profits for this year are going to be higher than will prove to be the case after providing for taxes at the new and higher rates which are inevitable. Even more serious, the quarterly earnings so computed are likely to give labor and the public generally an utterly false impression of the amount of profits being realized by industry from defense business or arising out of the defense program. If a corporation makes public a report showing an increase of 100 per cent or more in net earnings compared with the same quarter last year, it is only natural that the workers in that plant will feel that they are entitled to a greater share of the company's prosperity, and it will be difficult, if not impossible, to make them realize that these profits are overstated. This can be especially serious where some form of profit-sharing plan is in force.

Question Relating to Tax Accruals

Of course, the question at once presents itself in this connection—at what rates should the anticipated taxes be reflected in the financial statements? The only answer is to use estimates, based upon the latest and best information available, erring on the side of making a conservative provision rather than an inadequate one.

We are informed by the financial press that many corporations which accrued Federal income tax at 24 per cent during the first quarter of 1941, are now making provision at 30 per cent plus an amount sufficient to make up the difference by the end of the year.

Another question arises—to what extent should such provision be shown as a liability for accrued taxes, and to what extent be covered by an addition to a Reserve for Contingencies? Here there are conflicting considerations, and each case will have to be decided in the light of the particular circumstances. It is worthy of note that E. I. duPont deNemours & Co., in reporting its March 1941 quarterly earnings, showed a provision of \$17,143,000 for Federal taxes on income, based on existing law, and made a further provision for contingencies in the amount of \$3,500,000. Possibly this latter amount represents a provision for increases in tax rates in 1941.

It is believed that provision should be made currently for *all* taxes based upon current income or receipts, even though the legal accrual date may come after the close of the current period during which the income or receipts are recorded. For instance, where New York State franchise tax at the rate of 6 per cent will be payable with respect to income for the calendar year 1941, it would appear preferable, in the interest of both accuracy and conservatism, to reflect this tax as a charge against current operations in 1941, even though the liability therefor will not accrue until November 1, 1942.

Likewise, in computing the liability for both the old and the new form of excess profits tax in connection with interim statements, such computation should be made by placing the income on an annual basis, and not by taking into consideration merely the *amount* of income already accrued to the date of the statement. Obvious though this would appear, it is understood that this principle has not been observed in all cases. This can be accomplished most conveniently by estimating the total effective rate (of both income and excess profits taxes) for the year, and applying such rate to the income of the period covered by the statement.

Provision of Funds to Meet Tax Liabilities

The advice which has been given by a number of speakers on current tax problems deserves to be repeated here: Adequate provision of *funds* to meet all tax liabilities should be made, in addition to book reserves. This policy may prove to be of even greater and more vital importance in connection with the *contingent* tax liabilities which business must recognize and provide for. These contingent tax liabilities are of two kinds:

1. Those arising from retroactive increases in tax rates, and
2. Additional tax liabilities which may result in the future from changed interpretations or even changed provisions of tax law by the time the corporation's tax returns are examined.

In view of the seriousness of these liabilities, every effort should be made to ascertain or at least estimate their probable amount, and to make adequate financial as well as accounting provision for them.

For instance, a claim for amortization based on the total cost of new facilities eventually might be cut down for one reason or another. A failure to make a provision, both on the books and in actual available funds, for the contingent liability on account of the tax which might result from such a disallowance, might prove embarrassing if eventually the business is confronted with the claim.

All tax liabilities must be taken into consideration when formulating dividend policies, since a failure to do so could result in financial embarrassment. Likewise, in determining the amount of dividend payments to be made in order to avoid the risk of being charged with an improper accumulation of surplus and the resulting Federal corporate surtax under Section 102, I.R.C., it would appear not only proper, but essential, to take into consideration *all* tax liabilities and a reasonable allowance for any contingent tax liabilities.

Reporting Taxes Paid and Accrued

Following the example of the railroads and other public utilities, it is becoming more and more customary to show the total tax burden, in addition to and distinct from income and excess profits taxes, as a single figure in published statements as well as in the annual report of the president to the stockholders. The S.E.C. requires (in Rule 12-16 of Regulations S-X) that such taxes be shown in the "Supple-

mentary Profit and Loss Information," showing separately each significant item. To be able to make such a segregation of all tax expenses, rather than to include a portion of such taxes under other headings as normally would be done, may necessitate special analyses, or in some cases, special provision in the accounts. In fact, it may be preferable, for the purpose of comparison, not to make such a segregation in the income account itself, but to show in a footnote the total of all taxes, other than Federal taxes based on income deducted in arriving at net earnings. The use of a "clearing account" through which all tax charges are passed, will be found convenient for accumulating this information.

Some companies have adopted the plan of including allocations of all tax expenses in the departmental expense statements furnished foremen and other plant executives, for psychological reasons. The theory is that bringing these facts home to labor may prove helpful in making the workers conscious of the load of taxes, especially local taxes, which must be borne by the company, and which necessarily affect the ability of the company to pay their wages.

It is very important that complete information be available with respect to the book history and tax basis of every asset owned, where not reflected upon the books at its original cost. For instance, where the ledger accounts for land or securities show only a balance carried forward from some prior period, it may be necessary to analyze records running far back into the past in order to ascertain, first, the accounting record of all transactions relating to such property, and, second, the effect of all such transactions in determining the statutory "adjusted basis" of the asset for tax purposes. This information is essential to management for the consideration of any proposed sale or other disposition of such assets, as well as in the determination of invested capital.

Other information which it may be desirable to prepare for the purpose of determining certain business policies in the light of applicable tax laws, will depend upon the type of taxes which bear most heavily upon the particular corporation, and the changes in tax law currently being considered by the Legislature. The new and increased Federal *excise* taxes proposed by the Committee on Ways and Means may necessitate extensive studies by the manufacturers of many products to determine the probable effect of these taxes upon their business policies and operations, and the means to be taken to cope with the problems arising out of the increased tax burden.

The Tax Diary

The tax diary is an important record which should be maintained as a reminder of the due dates of all tax returns and tax payments to be made by the corporation (including any extensions granted), as well as a complete and accurate record of all returns filed. Sometimes, the company's tax records will show almost everything except the date the return was actually filed and, as you know, that eventually may be found to be an important fact. Incidentally, I might mention that one way to provide such a record, especially with respect to your Federal returns, is to accompany your letter of transmittal with a carbon copy thereof, requesting that it be stamped and returned to you as a receipt. You have the whole record on the carbon copy when it comes back. The collector will always send it to you if requested.

The expiration of the period of limitation for filing claims for refund of all *new* forms of state and local taxes which might be held unconstitutional should be noted in the tax diary. In this connection, it might be pointed out that in many instances it is essential, if a refund of such taxes is to be obtained, that the payment be made under protest. The keeping of such a diary might be considered a mere matter of clerical detail, but heavy penalties may result from any oversight. Hence, such a diary should be kept with the greatest care, and followed up regularly and in ample time.

A Separate Tax Department

Having in mind all the important tax matters which require constant thought and attention (including these minor but essential details), it would seem that no industrial organization of any size can afford to be without its own separate tax department in addition to its regular accounting organization. In the matter of advertising, business promotion, experimental and development work, repairs and similar expenses which are currently deductible for income tax purposes, but which are expected to result in increased profits in the future, management is fully aware of the fact that the net cost to the business of funds so invested may be only thirty cents on the dollar, since corporate income in the top bracket may be taxed as much as 70 per cent. In other words, it is good business to spend money for repairs when Uncle Sam will pay 70 per cent of the cost.

There is little doubt that, in the period now before us, money spent for an efficient, wide-awake tax department likewise may yield an excellent return on the net investment involved.

A saving in expenses may be lost in large measure through the loss of the deduction and consequent increase in income tax, but a saving of income tax is net, since we are not yet taxed on our income tax—not corporations, at any rate.

There are few business men today who are not keenly tax conscious—but many are still unconscious until it is too late, when it comes to considering the tax consequences of contemplated transactions. By the time they consult the tax doctor, it is time for the coroner—and the post mortem! The executive head of a tax department, closely in touch with the actual operations of the business, can render really constructive service, often of great value, by making timely suggestions with respect to the steps to be taken to avoid unnecessary tax burdens. The responsibility for such results rests upon management, in the first instance, to establish an adequate tax department so integrated with the other executive departments as to have full knowledge of the problems and contemplated moves of the business, and a recognized authority and duty to advise the operating executives with respect to methods of tax saving. The time to save taxes is before the transaction occurs, not when the return is being prepared.

I suppose everyone of us knows that. I suppose management knows it theoretically, but it seems to be the exception rather than the rule when management does get tax advice before taking steps, or when management does advise its own tax department of *contemplated* steps to determine if there is anything that should be done to avoid incurring an unnecessary tax burden.

DATA FOR THE PREPARATION OF TAX RETURNS

There is a saying about Government employees that “some die, and a few are promoted, but they never resign.” A somewhat similar situation exists with respect to records kept and information prepared for tax purposes. Never a year goes by without the need for some further information for the purpose of preparing tax returns, usually necessitating further accounts or analyses, but did any of you ever hear of any being dropped? . . . The answer seems to be unanimous.

Where much of the information needed in the preparation of certain returns can be obtained only from branch office and plant records, carefully thought-out questionnaires, to be filled out by the local accountants, will save much time and correspondence. However, many heads of tax departments find it essential to supplement the information so obtained by actual examination of the records by an experienced tax accountant, where justified by the amount of tax involved.

Current Recording Versus Special Analysis

To consider first the principles involved in the accumulation of data for the preparation of returns: It would seem elementary that if the desired information can be obtained more efficiently and more economically *after* the close of the accounting period, by means of special analyses prepared for that purpose, this should be done rather than to make changes in the regular accounting procedure and records solely for tax purposes. However, before concluding that this is the case with respect to a particular type of information, a number of factors must be taken into consideration:

1. Will the figures obtained by means of such a subsequent analysis be complete and accurate?
2. Will there be adequate time to prepare such analyses after the close of the accounting period, without harmful results? (For instance, failure to have the information immediately available might delay issuance of the annual report or affect its accuracy.)
3. Would any useful business purpose, in addition to furnishing information for the preparation of tax returns, be served by changing the accounting procedure or records so as to accumulate the information currently, instead of obtaining it by subsequent analysis?
4. If the particular facts are recorded currently in the regular accounting records in such manner as to be readily obtained without the need of special analysis, would this serve to avoid questions which otherwise might be raised in connection with the use of such figures in tax returns?

The answers to the foregoing and similar questions may indicate that it would be more desirable, in the long run, to make changes in the accounting procedure and records to obtain certain figures for

the purpose of preparing tax returns. However, there are conditions under which this is not feasible—for instance, where the figures needed for tax purposes do not, and can not be made to, correspond with those which must be used for the ordinary purposes of the business.

Two Sets of Records Often Necessary

To illustrate a case of the latter type, let us consider the situation of a corporation having buildings and machinery acquired for shares of its capital stock, where the cost of the property (the value of the securities at date of the exchange) is different from the statutory "basis" for Federal income tax purposes, and the estimated normal useful life established by the Treasury Department and acquiesced in by the corporation does not correspond with the estimated life which the management considers it prudent to use for general accounting purposes. Furthermore, the Treasury Department insists that no loss is sustained upon the retirement of plant assets, under its "composite rate" theory of depreciation, whereas the management may consider that the loss represented by the difference between the cost of the asset and the accumulated depreciation with respect thereto (adjusted for salvage, if any) should be reflected as a charge against operations rather than against the depreciation reserve.

In such a case as this, it is absolutely necessary to have two sets of records of depreciable property—one for general accounting purposes, and one for Federal income tax purposes. In addition to the summary or controlling accounts in the regular books of account supported by a plant ledger (whether in book or hand posted or punched card form), there may be a second plant ledger reflecting tax figures, or merely analyses reflecting the facts on the tax basis. However, the analysis method will become increasingly complicated as time goes on, if there are numerous transactions to be recorded.

Problems with Respect to Accounting for Depreciation

This situation also serves to illustrate another point. After a time the management may throw up its hands and decide to keep its accounts on the tax basis rather than continue the double set of records, especially in a case where the original cost of the assets is the

same as the "basis" for tax purposes, and the only difference relates to estimated life of assets and the amount of accumulated depreciation. Or the management may decide to adopt the individual unit method, computing depreciation separately upon each unit (or group of similar units) of equipment, as a means of avoiding the conflicts arising out of what the Treasury Department considers the composite rate method of computing depreciation. Under the unit method, the Treasury Department recognizes the deductibility of losses on retirement, and it is generally easier for the taxpayer to establish a satisfactory rate of depreciation for each unit. Whatever method is used for computing depreciation, adequate records with respect to all plant assets scrapped or abandoned are essential for both business and tax purposes.

An interesting case, in which the Treasury Department was overruled in its attempt to deprive a taxpayer of a part of its basis for depreciation merely because of the taxpayer's change to the individual unit method of computing depreciation, is that of the Washburn Wire Co., Memo. B.T.A. decision, Docket No. 98, 953.

But the taxpayer's situation today is very much like that of the old Army officer in the War Department who complained bitterly at the outbreak of the last war, that he had devoted his life to getting certain routines established and running smoothly, and now a war had to come along and upset it all! Taxpayers who have about adjusted themselves to the Treasury Department's depreciation requirements, in one way or another, now are likely to face fresh problems in connection with deductions for depreciation and amortization of emergency facilities, since the latter deduction may only be taken on the basis of a sixty-month life, regardless of the physical life of the asset, or its estimated useful life. This is satisfactory enough for general accounting purposes, as far as assets having a physical life of over five years are concerned, if it be assumed that they will not have a longer *useful* life, but for cost purposes it may be necessary to provide for depreciation on the basis of a shorter estimated life with respect to certain classes of equipment on which amortization is being taken. Many hours could be devoted to the consideration of the accounting and tax problems of the industrial accountant which already have arisen in connection with accelerated depreciation and the amortization of emergency facilities, as was brought out in yesterday's discussions of these subjects.

Depletion

Similar problems constantly arise out of the difference between good accounting practice and tax requirements with respect to the determination of deductions for depletion of oil and gas wells, mines and timber lands. Such differences are particularly striking in cases where percentage depletion is claimed. In such cases, of course, there is no relation between the deduction reflected in the accounts and that taken in the Federal income tax returns, but the relation between the cost (or other "basis" of the depletable property for Federal income tax purposes) and the total depletion deductions *allowed* with respect to the property becomes of the greatest importance if the property is sold, or even, in the case of a bonus received in connection with the granting of an oil or gas lease, when the lease is abandoned or terminates without the production of any gas or oil. (See Dolores Crabb et al., v. Commissioner, CCA-5th, 5/5/41, but note dissent.) Hence, it is essential in such cases to maintain memorandum records in which are reflected the figures shown in the tax returns, in addition to those shown in the regular books of account and the statements prepared therefrom.

Experimental and Development Cost

The situation is the reverse with respect to experimental and development work in a manufacturing plant; the treatment of such expenditures as capital costs or as operating expenses in the books of account is likely to be of the greatest importance, if not controlling, in determining their status for Federal income tax purposes. This is particularly true of those items where it is very difficult to draw a dividing line to separate operating expenses from the cost of developing and obtaining patents, or bringing out a new or improved product.

Again, differences are very likely to arise between the treatment of certain patent costs and expenses for accounting purposes and for tax purposes. The Treasury Department takes the position that most legal expenses incurred in connection with patents are to be considered as capital in nature, to be amortized ("depreciated") over the life of the patent. Without going into a discussion of the principles involved in determining the correct tax treatment of similar items, it suffices to say that management may decide to write off items which

are disallowed as deductions by the Treasury Department, giving rise to further differences between the books and tax returns, which must be kept account of through cumulative analyses or by the use of memorandum accounts.

The same situation may arise where patents are purchased under an agreement whereby the purchaser is obliged to make additional payments to the seller in any year in which sales of the product manufactured under such patents exceed a certain figure. Conservative accounting would require such payments to be treated as current operating charges, since they arise out of current sales, but the Treasury Department takes the position that they must be capitalized in the year in which made, and amortized ("depreciated") over the remaining life of the patent. (Cf. Jordan Creek Placers, 43 B.T.A. 131.)

Inventory Valuation

Another subject on which there could be almost endless discussion relates to possible differences between good accounting practice in valuing inventories and the method prescribed by the Treasury Department. However, I want to make one general remark on that subject at the outset: Of all the inventory tax cases of which I have read, or heard, or had a part, not one, as far as can be recalled, was initiated by the Government. By this is meant that in every case some claim or other action on the part of the taxpayer (including arbitrary or percentage write-downs of values shown by the physical inventory) led to the taxpayer's inventory value being questioned by the Government. The point is clear—where a taxpayer pursues a uniform inventory practice, in good faith, it is very unlikely that its inventory values will be questioned by the Government, *if the taxpayer himself* does not raise the question as to its correctness through a write-down, the creation of an inventory valuation reserve, or some special comment or qualification in the balance sheet or income account, drawing attention to some abnormality in the method of valuing. Here, then, it can be said that accounting practice may give rise to a tax problem, rather than the reverse.

There are few situations in which tax results may correctly be said to be *dependent upon* accounting procedure, although tax results often are *affected* thereby. However, in order to be entitled to change to, and remain on, the "last-in, first-out" inventory basis, it is

essential for the taxpayer to use that method, not only in its books and tax returns, but also in its published statements for credit and other purposes and in its reports to stockholders, etc.

While there may be many theoretical differences between good accounting practice and the methods approved by the Treasury Department for arriving at the cost of inventories, it is believed unlikely that such questions will arise in practice, so long as the method adopted by the taxpayer is followed consistently and in good faith.

Furthermore, as a taxpayer is given the right to use either the "cost" or "cost or market, whichever is lower" method of inventory valuation for Federal income tax purposes, regardless of the method used in his books and published statements, few *accounting* problems are likely to result on this account. Accordingly, questions of importance to the industrial cost accountant, such as the treatment of overtime pay (in excess of the base rate) in the determination of cost, idle-time overhead, and even standard cost variation, usually may be considered entirely from the standpoint of good accounting and the requirements of management.

The Accrual of Taxes

Another familiar problem concerns the difference between the time as of which various taxes are to be deducted for Federal income tax purposes and for cost and general accounting purposes. This had been mentioned previously, in connection with the time of accrual of New York State franchise taxes, and the same situation exists with respect to New York City gross receipts taxes and other similar taxes, the liability for which does not come into being until some time subsequent to the period in which the operations giving rise to the tax occur. It is a relatively simple matter to apply the Treasury Department's rules to the determination of the amount to be taken as a deduction in a given tax return on account of any specific tax accrual, but where there are a large number of such items, a considerable amount of work may be involved in obtaining all the necessary information to make the proper adjustments for Federal income tax purposes. Here, full details in the tax diary with respect to all tax returns, or complete files in the company's tax department with respect to *all* taxes paid by the company will be of great assistance.

When the relationship between accrual of taxes, bonuses based upon income, and costs, are kept in mind, there can be no failure to recognize the importance of making full and adequate provision in the accounts for *all taxes in the period to which they relate*.

Analyses made for the purpose of computing accrued taxes to be deducted in the Federal income tax return sometimes will disclose that certain taxes have not been accrued on the books, thus preventing the loss of the deduction which might result if it were not discovered until too late to reopen the return.

Reserves

The treatment of *reserves* likewise gives rise to many differences between accounting practice and Federal income tax procedure. Where a *true* surplus reserve is involved, there should be no conflict (the creation of or additions to such a reserve do not constitute deductions in arriving at income for either tax or general accounting purposes). However, there are many reserves which reflect more or less definite liabilities, provision for which good accounting practice requires to be set up as a charge against operations, although not deductible for Federal income tax purposes. Certain "deferred credits" or "deferred liabilities" give rise to similar differences in treatment. For example, where fees are collected (or charged) in advance for certain services (such as maintenance of equipment), good accounting would require the amount of such fees to be set up as deferred credits, to be carried into income ratably over the term covered by the service agreement, as earned. However, the Treasury Department has successfully maintained the position that such fees are to be taken into income in full when received (or charged). The same is generally true of reserves for maintenance, where a contractor or seller is responsible for the maintenance of property for a certain period of time. The courts have even gone so far as to hold that rent received in advance by a taxpayer reporting on the accrual basis, constitutes income when received rather than when earned. These differences usually are taken into consideration as a matter of course in the preparation of the tax returns, but where the amounts are considerable and the tax rates are very high, it is likewise important to give effect thereto in the computation of the tax liability to be shown in budgets and interim statements.

Record of Assets and Business by State

A great deal could be said about the practical importance of maintaining adequate records for establishing the amount of assets located in and business done within those states which permit the use of such data, in lieu of the prescribed statutory formulae, in arriving at the amount of state taxes imposed upon corporations doing business in more than one state. As far as can be determined, the taxing authorities of Pennsylvania and Vermont are the only ones who refuse to allow the use of actual data ("separate accounting") and insist upon the use of the statutory formulae in *all* cases.

The use of such actual data in lieu of apportionment often will result in worth-while savings in state franchise and income taxes, although not always. However, it clearly would be beyond the scope of this discussion to go into all the particulars of the various state taxing systems which must be considered in setting up the records for assembling such data.

In some states, such as Wisconsin, Michigan and Maryland, local taxing authorities require that information as to the book value of taxable personal property for the entire state by location, be furnished where the "true cost" or "actual value" is allowed to be used for personal property tax purposes. Where such information is required, it will be found helpful to arrange the accounts in such manner as to reflect this information.

DATA AS TO PRIOR YEARS

The possibility that detailed information or supporting data with respect to prior years may be required in connection with the preparation of future tax returns, as well as in the examination of tax returns for prior years, makes it very important currently to record all such data in such form, and to file important records and supporting data in such a way, as to be readily available and clearly understandable when required, even though it be years afterwards.

The importance of old records is evident in connection with the present form of excess profits tax, even where the average income method is used, and may be even greater next year if the determination of invested capital becomes essential.

Unless the possible future use of accounting records be kept in mind, it very likely will be found, when information is sought, that

the explanations of entries which appeared perfectly clear when made, are not as obvious as had been believed, and that supporting data, which once could have been produced quite readily, can be located only with a great deal of expense and difficulty, or not at all.

The need for preparedness in this regard is quite widely recognized, but it still may be of service to some to offer these words of caution. It also is important, not only to preserve summaries and analyses prepared from the books, but also to file them in such a way that they can be located with the least difficulty, as they often will be the means of saving a great deal of time that otherwise would be lost in reconstructing the figures. In addition, it is not enough to have a good filing system for such tax data; it is highly desirable to arrange and review all papers relating to each year's principal returns in advance of their examination by the taxing authorities. Experience has shown that grounds for deductions to be claimed, etc., are discovered surprisingly often in this way.

Use of a Private Ledger

Because of the frequent necessity of furnishing complete information in regard to operations of past years, it has become a common practice to open new general ledger accounts each year, so that the accounts for each year form a complete volume in themselves, without the necessity of referring from transfer binders to the current ledger. On the other hand, a properly designed and maintained *private ledger* may be used to keep within the compass of a reasonably small space all the important accounts of a corporation for a period of many years. Experience has shown the advantages of such a method, combined with properly explained and supported journal entries covering all important transactions.

Without going further into detail, it might be mentioned, as an indication of the method of operating such a private ledger, that the total annual additions to each important property account are transferred to the private ledger from the general ledger in one lump sum in closing the books each year, and other accounts are similarly transferred annually, recording *currently* in the private ledger only unusual and important items, such as the original issue or retirement of stock or bonds, etc. Such a method has many business advantages aside from use in connection with tax matters, but it will be found particularly helpful for the latter purpose.

The new provisions of the Excess Profits Tax Act relative to abnormalities in income and deductions require the comparison of nearly every operating account with the average for the preceding four years, necessitating detailed analyses of such accounts for the years 1932 to 1939, inclusive, in addition to the current year.

Likewise, historical data on costs and operating profits have the greatest importance today in negotiating any defense contract or sub-contract, as well as in establishing the right to a certificate of non-reimbursement when one is required in order to obtain a deduction for amortization of defense facilities.

TAX WITHHOLDING RECORDS

Records for determining the amount to be deducted, on account of taxes withheld at source, from payments to various classes of payees, are constantly assuming greater importance. The most numerous class of such payees, involving the greatest number of entries, consists of employees, with respect to some or all of the payments to whom it is necessary to withhold:

1. Federal old age benefit taxes.
2. State *income* taxes (with respect to non-residents employed in states levying such taxes).
3. Federal income taxes (now only with respect to non-resident alien employees, but soon, perhaps, with respect to all employees).

Because of the necessity of determining the amount of federal and state social security tax payments to be made *by the employer* with respect to each employee, it is logical and customary to combine the record of these payments with the foregoing. Such records likewise serve the purpose of payroll records, from which may be prepared the related returns and the information slips which the Social Security Act requires to be furnished to employees. The accounting problems in this connection are numerous, but more properly come within the scope of a talk on social security taxes—for example, whether such taxes paid by the employer should be considered as a part of wages and salaries and charged to the same account, or should be charged separately to an appropriate tax expense account. There are practical and theoretical objections to either method of treatment.

Withholding on account of taxes likewise is required with respect to many other classes of payments, such as interest, dividends, royalties, rents, commissions, etc., for both federal and state income tax purposes, and it behooves management to keep fully and currently informed and to maintain adequate records with respect to these requirements, as the payor is held responsible for the result of any oversight or neglect in withholding and paying over to the taxing authorities the proper amount of tax.

Conclusion

A few of the industrial accounting problems arising from current tax laws have been touched upon; many more have remained unmentioned though not overlooked. It is hoped that some of the suggestions made will prove of value. None are intended as instructions in accounting methods, but merely as hints which may prove helpful in certain circumstances. Above all, however, it is hoped that what has been said will serve to arouse thought and discussion on the important subject of what the accountant needs to do in order best to cope with the problems arising out of our present and anticipated tax laws.

We must confront the fact that henceforth it is not enough to deal with tax laws as they are—we must take into consideration the prospective taxes which are likely to overtake us soon and to affect all of us radically, not only as accountants and business executives, but as individuals as well. Tremendously heavy taxes stare us in the face—I don't believe there are many French, or Belgian or Dutch business men alive today who do not wish they had been taxed more, and sooner! Our task has to do with determining and sustaining our fair share of this burden—not avoiding it.

CHAIRMAN KLEIN: I think Mr. Seghers has opened up, for some of us at least, a much neglected field. A good many organizations devote considerable time to cost controls which, under the present high rates of taxation, as Mr. Seghers brought out, simply means a saving of thirty or forty cents on each dollar of reduction in costs. On the other hand, in the field of taxation, you save one hundred cents on the dollar, and certainly there is a lot of room in most organizations for some real ground work by the industrial accountants in furnishing the data that is so essential for the tax experts in the

preparation of returns. Gentlemen, the meeting is now open for discussion.

ALFRED G. BLOCK (*Secretary & Treasurer, Barnes Drill Co., Rockford, Ill.*): With reference to receipts for tax returns, we have followed the practice of sending our tax return by registered mail and getting a registered receipt. I think that is better than a letter, because that gives us the actual date the return was received by the Bureau of Internal Revenue.

MR. SEGHERS: There is something to be said for it. However, you still would have to supply some form of evidence of what was inside of that envelope, whereas if you use a letter which recites the nature of the return, etc., you have on one piece of paper all your evidence, with the date stamped thereon. I can see the advantages of your method, but I also see the advantage of the use of a copy of the letter of transmittal, which could be sent by registered mail as well. I believe a great many taxpayers do that. I think the transmittal letter coming back with a stamp does prove helpful.

I wonder if there is anyone here who would like to say anything on the subject of the New York State franchise tax and the time for accrual. There are at least three ways that I am familiar with, and I understand there are five ways, in which the New York State franchise taxes are accrued on the books for general accounting purposes. This matter seems important, and I personally can see only one way that is correct for accounting purposes; but, like everything else, a man who sees only one side is perhaps mistaken. Perhaps there are other views. My feeling is that the period in which the income is earned should bear the 6 per cent income charge, regardless of when the legal accrual takes place. Others go on the theory that since the liability doesn't accrue until 1942, we will say, with respect to 1941 franchise tax based on 1941 income, it should be entered as a 1942 charge.

A question came up yesterday in the amortization session that is appropriate here, namely, where those who are taking amortization intend to charge it in their accounts. Should amortization be charged currently as part of cost in the same manner as normal depreciation, either at the normal rate or at an accelerated rate; and should the difference between that and the amortization deduction, if reflected on the books, be charged against general expense? Or should those

who are taking amortization not reflect it on their books, but continue to take depreciation on their books and amortization on the tax returns, indicating the difference in the reconciliation schedule of the return? Is there anyone here who has that problem to discuss?

EMORY A. AUSTIN (*General Auditor, Hammermill Paper Co., Erie, Pa.*): I would like to raise a question on the reconciliation of the tax records with the accounting records when punch cards are involved. I would like to have somebody speak on that point. It seems to me that that is quite a practical matter and can be done. We are at a point now of attempting to do that very thing. I would like to have somebody either agree that it is possible or challenge my statement.

MR. SEGHERS: Is there anyone here who would care to say something about the practical aspects of keeping the plant records on punch cards? Is there someone here who has such a system?

CHAIRMAN KLEIN: I regret that our time is so limited that we will now have to terminate our discussion. I suggest we give our speaker, Mr. Seghers, a rising vote of thanks.

. . . The meeting adjourned at twelve o'clock noon . . .

SESSION VI
RESPONSIBILITY OF THE PUBLIC AND
INDUSTRIAL ACCOUNTANT FOR
INVENTORIES

THURSDAY AFTERNOON, JUNE 26, 1941

FRANK KLEIN, *Chairman*

SAMUEL J. BROAD is a Partner in the firm of Peat, Marwick, Mitchell & Co., with which he has been associated since 1916. He is a Certified Public Accountant of New York and several other states and has taken an active part in the work of the professional accounting societies. For several years he served as a Director of the New York Society of C.P.A.'s and as a member of several of its committees. Mr. Broad has also been active in the American Institute of Accountants, having served as Vice President and as member or chairman of several committees. At present he is Treasurer of the Institute, a member of the Executive Committee and Chairman of the Committee on Auditing Procedure.

LOGAN MONROE began his industrial career by spending two years in the factory of Henry Vogt Machine Co. of Louisville where he took a training course involving several different trades. This was followed by two years as Cost Clerk for this Company, and two years as Cost Accountant and Purchasing Agent for the Vogt Brothers Mfg. Co. Following an interlude for overseas war service, Mr. Monroe returned to Cleveland and spent nine months as Factory Accountant for the Willard Storage Battery Co. before accepting the position as Cost Accountant with the Eaton Axle Co., progenitor of his present employer. His duties expanded to include supervision of all costs as his Company absorbed other plants by purchase and merger. In 1928 he was made Assistant Treasurer of the Eaton Mfg. Co., the position he now holds. In this capacity he has supervision of all accounting, auditing, costs and budgeting for his Company. Mr. Monroe joined the Association in 1920 and is a charter member of the Cleveland Chapter which he served as President for two years from 1931 to 1933. Elected to the National Board in 1933, he served as a National Director for six years.

ARTHUR K. SCHULZ is Assistant Controller of the Chase National Bank of New York City. He is a graduate of the University of Wisconsin where he majored in finance, accounting and law. Prior to his association with the Chase National Bank, Mr. Schulz secured a wide experience in the fields of factory production, cost installation and operation, public accounting and industrial methods improvement. During the past twenty years in the banking field, his work has emphasized control—in methods, taxes, accounting, reports, inspections, costs and special surveys.

RESPONSIBILITY OF THE PUBLIC AND INDUSTRIAL ACCOUNTANT FOR INVENTORIES

CHAIRMAN KLEIN: We are going to try something a little different this afternoon. We are going to have a regular technical presentation by each of our three speakers in the usual formal way. That will be recorded in the *Year Book*, as usual. After that is over, our three speakers are going to engage in an informal panel discussion with you. No part of that informal discussion will be reported. You will not be required to give your name or your business connection, so that you can feel free to let your hair down and talk as freely as you want on the subject.

The subject of inventory control, which has received much publicity in recent years, is so broad that there is little wonder so many divergent views regarding its effective control have been expressed. In fact, some of these opinions really have not been divergent at all, but have dealt with separate phases of inventory control and the individuals properly responsible for them. Our conference this afternoon will attempt not only to delineate some of these functional responsibilities but also to promote discussion on those aspects of control on which there may be a difference of opinion.

Our subject might more properly have been titled "Responsibility for Inventories by the Public Accountant, the Industrial Accountant and the Credit Grantor," because we are privileged to have participate with us this afternoon a leading representative of each of these three fields of activity.

The first speaker, who will present the public accountant's viewpoint, is a Certified Public Accountant of New York and several other states. He has served for several years as a Director of the New York State Society of Certified Public Accountants and is the Treasurer of the American Institute of Accountants, a member of the Institute's Executive Committee and Chairman of the Committee on Auditing Procedure. He is a Partner in the firm of Peat, Marwick, Mitchell & Co., with which he has been associated for twenty-five years.

It is a great pleasure to introduce to you, Mr. Samuel J. Broad.

RESPONSIBILITY OF THE PUBLIC ACCOUNTANT FOR INVENTORIES

SAMUEL J. BROAD

Partner, Peat, Marwick, Mitchell & Co.,
New York, N. Y.

THE responsibility of the public and industrial accountant for inventories is a subject related to the broader question frequently asked in recent years, "Whose balance sheet is it?" Though loosely worded, this query arises from an attempt to determine whether the responsibility for the representations contained in the balance sheet are those of the company involved or of the public accountant whose report is appended to it.

You may expect me, as a public accountant, to suggest that the responsibility is that of the issuing company rather than of the auditor, but the answer is not quite as simple as that. Both have their responsibilities, though different responsibilities, and I think the nature of the difference can be explored by considering the subject of inventories.

The Accounting Function

Accounting performs a dual purpose. It serves as a tool for determining management policies and also provides a historical record of transactions. Periodically, management is called upon to make a financial accounting for its stewardship of other people's money and to furnish statements which are a fair presentation of the position attained and the earnings or progress made. In an industrial enterprise the inventory is a vitally important element in the presentation of such an accounting. When we consider that in addition to its place on the balance sheet the inventory is one of the largest items affecting the profit and loss account and the determination of the results for a period, and apart from depreciation probably the most difficult to measure, no emphasis is needed to stress its overwhelming importance.

For the purpose of presenting a coherent and unified picture of the financial side of the business, management must necessarily rely upon its accounting staff supplemented by the assistance and advice of public accountants. Primarily, the function of accountancy is to

co-ordinate the work done by other people. It gathers together and reports upon the data they furnish; its task is to reflect the results of their efforts in a single picture which is a fair reflection of actual conditions as they exist and of actual transactions as they have been consummated. It should stress the important elements, and here the inventory is in the foreground.

Public Accountant's Opinion Based on Evidence

I am asked to deal with the subject of our discussion primarily from the standpoint of the responsibility of the public accountant. The public accountant is called upon to express his opinion as to whether the position and results of operations are fairly presented, and his opinion must be based upon an adequate examination. His opinion is predicated upon the evidence which he has seen during the course of his examination. And if the evidence furnished to him or available to him is of sufficient strength to satisfy a person reasonably skilled in measuring it, a person who also has certain standards as to the strength of the evidence which he must require, he is entitled to, and does express, an affirmative opinion.

The responsibility of the public accountant thus relates primarily to the work he should do or the evidence he should have before him to warrant his opinion. During the past year or two, as you know, standards of auditing procedure have been established with regard to inventories which increase the strength of the evidence necessary to permit an unqualified report. The task of defining practicable procedures which would provide substantially increased safeguards at a reasonable cost, particularly in so far as inventories are concerned, was a major problem facing the profession. It was necessary that the cost of the added protection should not approach any reasonable probability of loss which might be expected to result from its absence. At the same time the added procedures had to be practicable and workable because only grief and disillusionment could result from attempting the impossible and encouraging a false sense of security.

Books and Physical Inventory as Evidence

The evidence available to the public accountant with regard to inventories is two-fold—the data contained in the books and controlling

accounts, and the physical inventory itself. The necessity for inventory book records and inventory control in the accounts is obvious, and little time need be spent in discussing them. Looking back through the years to my early days, I can recall wondering why so much effort was given over to controlling cash and bank accounts, while the control of the larger and relatively more important item of inventory was often largely disregarded except for the existence of physical safeguards. The only conclusion I could reach was that it was because cash was more vulnerable, more easily moved and more easily concealed.

Today, however, that situation has been largely corrected, chiefly, I believe, as a result of efforts of organizations such as your own and of public accountants. The only point I would like to emphasize on this phase of the subject is to call attention to the increasing recognition being given to the necessity of adequate internal check and control. One of the principles of internal check and control is that it is good organization, where possible, to have an automatic cross-check upon every part of the accounting function. For example, an employee responsible for the physical stock in a department should not keep the records controlling that stock or determine the amounts to be credited to his stock account. The necessity for such safeguards, or such strengthening of the chain of evidence is, I think, recognized today. If there is a weakness in this direction it will probably be necessary for the public accountant to supplement his examination in order to obtain stronger evidence elsewhere.

Evidence as to Physical Existence of Inventory

Passing on to the evidence supporting the physical existence of the inventory, it is here that the examination required of the public accountant has been extended. In former years his procedures included inquiries or a review of the inventory instructions to ascertain in what manner the inventory was taken, an inspection of the sheets to see that those who performed the various operations evidenced the fact by initialing or signing the inventory sheets or tags, and a test-check of the final inventory sheets with original tags or listings. Except for such matters, however, the public accountant in the usual examination did not deal to any substantial extent with the various steps in determining quantities and description which bridge the gap between the inventory instructions at the one end and the completed

inventory at the other. The intervening operations not covered were: first, the actual counting, weighing or measuring of the merchandise and listing it, and second, the control exercised over the quantities so listed during the subsequent process of pricing, extending and summarizing the inventories.

Although the most important part of the public accountant's work on inventories still relates to the book accounts, it has been supplemented so that it is now a recognized standard of auditing procedure that he should, wherever practicable and reasonable, have some actual physical contact with the inventory in cases in which it is a material factor. The manner in which he does this must be compatible with his function as an auditor and its extent must be justified on the grounds of cost and practicability. Detailed technical knowledge of the product is not necessarily essential. What is required is some knowledge of the methods of operation and of skill in passing upon procedures suitable for adoption, and these must be part of the public accountant's equipment.

Evidence That Inventory Instructions Are Followed

The public accountant's object is to see in the first place that the inventory instructions, if carried out, are such as to give reasonable assurance of a careful inventory, that the plan and extent of inventory-taking is adequate, and that a reasonable degree of internal check and control is provided. His attendance at the inventory-taking is for the purpose of seeing that the instructions are carried out, that the plans materialize. In satisfying himself as to the latter, he is justified in giving due weight to the internal check and control exercised, if this is adequate. For example, if the organization is such that it can be arranged for employees familiar with the merchandise to prepare the initial listing and later for a second group of employees, independent of the first and also independent of the particular departments involved, to check the initial list, and if the auditor sees that that is done, he is entitled to attach a greater degree of credibility to the resulting inventory than if no such double and independent check is made. When the auditor examines vouchers, he looks for the proper approvals and those, in part, are his assurance that more than one person was involved in the transaction and that the system of internal check and control with regard to disbursements is functioning and may be relied upon. Similarly, by being

present at the taking of the inventory, he can take steps to assure himself that the system of internal check and control as applied to the taking of the inventory is also functioning. This, as an auditor, he is qualified to do, and his observations and inquiries, or test-checking, should be sufficient to satisfy him whether a careful inventory has been taken.

Observation and Inquiry

Some indication of what is meant by observation and inquiry would seem desirable. As in other steps of audit procedure, the care of a reasonably prudent man must be exercised. It is not sufficient merely to be present and rely upon the moral effect of the auditor's presence to assure careful work. The auditor should have his eyes open and his ears open. His observations may lead him to question whether certain groups of merchandise are moving; for example, a pile may be covered with dust or it may be located in an inaccessible place. Observation of those calling and listing the inventory can readily lead to a conclusion as to whether they are performing their duties carefully and conscientiously. Inquiries and informal conversations with foremen and subordinates may be expected to be quite helpful in disclosing matters of interest. Undoubtedly the auditor will make occasional checks of quantities recorded, and he may well increase the moral effect of his presence by making notations of items listed to be checked later against the final inventories.

There is little purpose, however, in carrying the work through to this point unless the auditor goes one step further and closes up the remainder of the gap. Little is gained by having a careful inventory taken if the quantities recorded may subsequently be altered before the final inventory total is recorded in the accounts.

What safeguards may be practicable will be determined by the circumstances of a particular situation. In some cases the auditor may be able to arrange to retain duplicate copies of the original inventory sheets or tags. In others, he may be able to obtain an over-all total of the items where the commodities are similar in nature; or he may be able to make an immediate check with stock records which are controlled in the general accounts. I do not believe that it is the auditor's duty to personally exercise the control over the inventory or the inventory sheets during this period (as he would in the case of securities or cash which he himself was inspecting), but rather it

is part of his task to satisfy himself whether or not the proper control is exercised within the organization, by adequate means of internal check and control during the intervening period. For example, it would seem undesirable for the inventory sheets to be left in the hands of the foreman or stockkeeper or anyone who was subject to check and might have an interest in changing the quantities.

Physical Inventory as a Check on Perpetual Inventory

In most examinations one of two basic situations will be encountered. In comparatively simple cases complete reliance is frequently placed upon a physical inventory taken at the end of the year and there may be no formal stock records or inventory controlling accounts. In the majority of the more important cases the inventory is controlled by perpetual inventory or stock records and in such cases the main purpose of a physical inventory is to support the accuracy and credibility of these records and, if necessary, to adjust them. Obviously, where the latter condition exists, there is a greater degree of internal check and control because, if the inventory procedure is well planned and organized, employees who keep the records will not determine the inventory, but each group will act as a check on the other. The physical inventory independently supports and adds credibility to the perpetual records and indicates to what extent reliance may be placed upon them. The auditor approaches the situation from both directions. If, as a result of his work, he reaches the conclusions, first, that the inventory records are adequate, second, that the inventory itself has been carefully taken, and, third, that the two are in substantial agreement though independently arrived at, the weight of evidence is very strong and justifies him in expressing an affirmative opinion.

Reviewing Principles and Judgment in Pricing

I have directed these remarks primarily to the evidence supporting the inventory quantities and the book records controlling them and, as you will have observed, I have placed the principal stress upon the methods used in determining the two sides of the equation. Direct knowledge of all the details of business is impossible in any but the simplest organization. When all the evidence which supports the physical existence and ownership of the inventory is gathered,

there still remains the important question of the amount at which it should be stated or valued. Elements of principle and judgment enter into this question particularly. Errors at this stage of the work are usually much more far-reaching in their effect than routine errors in counting or measuring the stock or in the clerical part of the work. Probably the most important part of the independent public accountant's function is to make an independent review and check of the principles adopted in pricing the inventory and of the decisions on matters of judgment which must be made in the process. For example, in determining the profit for a period, the amount of the inventory to be used in determining the cost of sales should not exceed the cost of the particular goods; otherwise the cost of sales will be understated and the profits overstated. Thus, it is not sufficient merely to ascertain whether the goods are worth the amount at which they are carried, but it is necessary further to make sure that they are not included at more than cost. On the other hand, if there have been shrinkages, either due to decline in cost of replacement or due to factors of obsolescence or deterioration, which have had or will have an adverse effect upon the operations of the company, it is necessary to see that adequate consideration is given to them.

Summary

Perhaps the relative roles of the industrial and the public accountant in connection with inventories could be summarized by saying that it is the function of the industrial accountant to see that there is satisfactory evidence supporting the inventories, both in the controlling accounts and in the methods adopted in taking and pricing the physical inventory; and that it is the function of the independent accountant to review the evidence and form his conclusions. Thus, it is desirable that there should be consultation between the two to reach an agreement as to what evidence should be considered satisfactory and to what extent it is practicable to furnish it.

The work of the independent accountant and the industrial accountant mesh in together. Like well-oiled machinery there should be no clashing of gears, no friction, and as little overlapping as possible. Perhaps the work of one is primarily constructive and that of the other primarily analytical and critical; perhaps one provides the evidence and the other examines it; perhaps one starts in

where the other leaves off. But together they perform a function of increasing importance to modern enterprise.

CHAIRMAN KLEIN: With each additional paper that is presented at this conference, I am more convinced than ever that we are extremely fortunate in belonging to an organization of this kind that can bring together such skilled, highly trained executives to devote so much time to the preparation of papers in this co-operative effort.

Our second speaker, who will present the industrial accountant's viewpoint, has had many years of practical experience in that field. He served as apprentice and cost clerk in the Henry Vogt Machine Company of Louisville and installed a cost system for the Vogt Brothers Manufacturing Company. He was Cost Accountant for the Eaton Axle Company and since 1928 has served as Assistant Treasurer of the Eaton Manufacturing Company, in which capacity he supervises the accounting, auditing, costing, budgetary control and allied activities of his company. He has been a member of N.A.C.A. since 1920, is a charter member of the Cleveland Chapter, and has served that Chapter as President for two consecutive years, in addition to having served as a National Director for six years.

I am very glad to present to you, Mr. Logan Monroe.

RESPONSIBILITY OF THE INDUSTRIAL ACCOUNTANT FOR INVENTORIES

LOGAN MONROE

Assistant Treasurer, Eaton Manufacturing Co.,
Cleveland, Ohio

WHEN I was invited by Frank Klein to present a paper on the "Responsibility of the Industrial Accountant for Inventories," limiting its length to twenty minutes as a maximum, I told him that twenty minutes was too long a time if the subject were condensed to the ultimate, and twenty hours was too short a time if the subject were fully covered. For that reason, what follows will be only an outline or summary of the more important duties and responsibilities of the industrial accountant with respect to inventories. For the pur-

pose of this paper the term industrial accountant will include the treasurer, controller, cost accountant and their respective staffs.

It seems to me that the industrial accountant's responsibility for inventories logically divides itself into two main divisions, and I list them in what I consider their relative importance—

First: Responsibility for inventory control.

Second: Responsibility for the proper expression of inventories in the accounting records.

Responsibility for Inventory Control

There is some difference of opinion as to the degree of responsibility that the industrial accountant should have for the control of inventories; however, I believe he should not only accept but demand a large and ever-increasing share of this responsibility. I am of the school that thinks the industrial accountant should not only record history but should help make it. A good definition of inventory control is—the provision of the required quantity and quality of material at the required time and place with the minimum investment possible. I think that last phrase—"with the minimum investment possible"—places the industrial accountant right in the middle of the picture, especially when you consider that to the original investment must be added all the costs of carrying the inventories, which costs include interest, property taxes, insurance, space charges, handling costs, theft, deterioration, and last but far from least, obsolescence. These costs will total annually from 10 per cent to 25 per cent of the original cost of the inventory, depending upon the industry concerned.

The provision of the required quantity and quality at the required time and place is usually the responsibility of the operating heads, but there too the industrial accountant should be well qualified to make himself heard.

Essentials of Inventory Control

There is no royal road to good inventory control; it can't be laid out from a blue print. It is dynamic and it is different in each company and in each industry, but there are certain effective elements and devices that appear in almost every good inventory control plan. It should start with a budget, forecast and plan. Call it what you will; as my good friend, Charlie Reitell, has often said, you must

have a target to shoot at. There should be standardization and simplification of material and products. Procurement and purchasing should be co-ordinated and controlled. There should be sufficient but simple internal checks and controls such as receiving records, requisitions, transfers, perpetual inventory records, scrap reports and shipping tickets, plus proper controlling accounts to prove the accuracy of all these records.

Probably more important than all these is the human element, the personnel that makes it work. Are they intelligent, interested, aggressive and imaginative? For in the last analysis inventory control like most things rests upon knowledge—knowledge of the past, knowledge of the present, and the imagination to convert that knowledge into facts of the future.

The industrial accountant should have a prominent share in the responsibility for all of these things, and the good accountant will usually be found dominating the picture, as he should.

I should like to go back for just a moment to re-emphasize the importance of the purchasing policy in any inventory control plan. We are again in a time of advancing prices, scarcity of materials, and the ever-resultant increasing inventories. This is the time when careful purchasing budgets are thrown out the window and a flood of material brought in. This is the time when all inventory controls will be tested and many will be found wanting. Purchasing is the most strategic point in inventory control, for once material has been purchased it is yours, and regardless of all the elaborate schemes of internal control that might be devised, it is still yours until it is fabricated and sold for whatever the market will pay.

So much for inventory control.

Responsibility for the Physical Inventory

The second major responsibility of the industrial accountant is the proper reflection of inventories in the accounting statements. I do not think there is any doubt about whose responsibility this is. The Securities and Exchange Commission has stated that "The fundamental and primary responsibility for the accuracy of information filed with the Commission and disseminated among investors rests upon management. Management does not discharge its obligation in this respect by the employment of independent public accountants, however reputable. Accountants' certificates are required not as a

substitute for management's accounting of its stewardship, but as a check upon that accounting."

This responsibility naturally divides itself into two parts: first, the physical inventory; second, the valuation of the physical inventory.

The physical inventory is the continuous or periodic physical measurement of material owned. In a way, this is part of inventory control, but it is more a part of inventory accounting because the primary reason for it is a check on the records and the proper reflection of inventory values in the accounting statements. For that reason I believe the general supervision of the physical inventory should be the responsibility of the industrial accountant rather than that of the production or operating head of the business.

If perpetual inventory records are maintained, a continuous check can be made throughout the year, eliminating the necessity of a complete physical inventory at one time. If this procedure is followed, every item should be checked at least once each year, and several times is better. As a rule, however, such records are inadequate for in-process inventories. Although great progress has been made in the last twenty years in the use of perpetual inventory records, it is still customary for the great majority of concerns to take a complete physical inventory at or near the end of the fiscal year.

Requisites for Good Physical Inventory

The prime requisites for a good physical inventory are proper preparation and the right personnel. Written instructions should be compiled well in advance of the inventory itself and should outline the date, personnel, their duties, and the complete procedure to be followed. Particular attention should be devoted to the following items due to their more or less complicated nature:

1. Materials owned outside the plant.
2. Materials inside the plant belonging to others.
3. Materials invoiced by vendors—not yet received.
4. Materials received from vendors—not yet invoiced.
5. Materials shipped to customers—not yet invoiced.
6. Materials invoiced to customers—not yet shipped.
7. Materials to be salvaged or scrapped.
8. Supplies and perishable tools.
9. Slow-moving and obsolete inventory.

After the inventory instructions have been properly drawn and the personnel has correctly followed these instructions, the industrial accountant will have discharged his responsibility up to the point of providing the correct quantities and quality.

Responsibility for Inventory Valuation Secondary

The final, and to me the least important responsibility of the industrial accountant with respect to inventory is its valuation. In this respect I am an iconoclast, and in the discussion period I shall probably suffer the usual fate of such individuals. After observing for many years the forensic efforts of the proponents and protagonists of the many methods of inventory valuation, I am reminded of the six blind men and the elephant—resolve all of their opinions and you still have the elephant. Inventory valuation is primarily to establish profit or loss, and over a period of years the various methods of valuation will result in approximately equal totals.

I have no brief for any particular method. First-in, first-out; last-in, first-out; base stock; cost or market; average cost; or any other method—they all have their advantages and each can be best applied under certain conditions. However, it is not only desirable but it is required by the Bureau of Internal Revenue that the method of valuation be consistent from year to year.

On the other hand, I do not want to minimize the importance of the method of inventory valuation. There is no question of its importance, but I am only expressing the opinion that the responsibility of the industrial accountant in respect of valuation is of secondary importance as compared to his other inventory responsibilities. The industrial accountant is a part of management, and management's primary function is to earn a profit. As I said previously, an industrial accountant not only records history but he should help make it, which is just another way of saying that he should help make a profit. I contend that he can help make far more profits by controlling the inventory than he can by pricing it.

Responsibility for Applying Valuation Formula

However, in spite of these somewhat agnostic remarks, the industrial accountant still has a responsibility for the correct valuation of the inventory. In my opinion the method adopted should be

agreed upon between the management (including the industrial accountant) and the public accountant, with the opinion of the public accountant predominating. After the method of valuation has been decided it is the responsibility of the industrial accountant to value good inventories in accordance with this plan. It should be unnecessary to emphasize the importance of clerical accuracy.

Slow-moving and obsolete inventories present an additional problem. Such inventories may be valued in various ways, most of which in the final analysis will be the result of an arbitrary or agreed basis among the operating head, the public accountant and the industrial accountant, but in this case, due to his familiarity with operations, inventory movements, and his accounting training, the industrial accountant's opinion should predominate.

Inventories present a constant problem and challenge to accountants, both public and industrial. They provide a perennial subject for our conventions and, if our past sessions can be taken as a criterion, the brevity of my remarks will be amply compensated by the discussion afterward.

CHAIRMAN KLEIN: Thank you very much, Mr. Monroe!

You will notice that each of these gentlemen is shooting straight from the shoulder. They are all men on the firing line and they are making fine, direct and practical presentations.

The third speaker this afternoon is a graduate of the University of Wisconsin, where he majored in finance, accounting and law. He has secured a wide experience in the fields of factory production, cost installation and operation, public accounting and industrial methods improvement.

During the past twenty years in the banking field, his work has emphasized control in methods, taxes, accounting, reports, inspections, costs and special surveys. He is now Assistant Controller of the Chase National Bank of New York City.

It is a great pleasure to introduce to you, Mr. Arthur K. Schulz.

INVENTORIES FROM THE VIEWPOINT OF THE
CREDIT GRANTOR

ARTHUR K. SCHULZ

Assistant Controller, Chase National Bank,
New York, N. Y.

AT THE outset it might be well to clear the air a bit. The credit grantor—and certainly that applies to the banker—has no desire to run any business other than his own. In other words, he is not granting credit for the sake of acquiring control of a business. Slow loans are expensive items from the standpoint of both the creditor and the debtor, and of course to the extent humanly possible they should be avoided.

Moreover, the grantor of credit is not generally interested in only one-shot credit opportunities; and the successful granting of credit intermittently in accordance with need must be achieved on the basis of mutuality of interest and of co-operation. The relationship of creditor and debtor is one of a similarity of interest such as exists continuously between seller and buyer.

Business Failures

A few historical facts may be in order. It is commonly known that we have—and have had for some years—an average of about two million commercial and industrial business enterprises operative in the nation, and the failures according to Dun & Bradstreet have varied roughly from $\frac{1}{2}$ of 1 per cent of the total number to a high (in 1932) of about $1\frac{1}{2}$ per cent of the total. Roughly speaking, during the period 1926–36, the average of failures was about 1 per cent of the total, or about 20,000 per year; and if there were not, in most cases, high co-operation between creditor and debtor, these failures would be a great deal higher.

But this means, despite all our efforts at good management and good credit, that something like 20,000 enterprises go out yearly with losses to creditors. The causes are varied, but improper extension of credit is acknowledged to be a notable one.

Importance of Inventories

Inventories comprise a large proportion of the current assets of substantially every retail, wholesale or manufacturing organization, and they are perhaps the largest imponderable. Totals as of January 1, 1940, were close to 18 billions of dollars; retail running about 5, wholesale $1\frac{1}{2}$, and manufacturing something over 11 billions.

It might be interesting to note here that inventories of retailers, wholesalers and manufacturers were up January 1, 1940 compared with the previous year in percentages of 7, 11, and 7, respectively. We have undoubtedly proceeded upward a good deal from that point, except where priorities have had their effect, or in those cases where there has been a notable decline in available raw material. That such increments in inventory are due to defense activity and to the consequent departure from hand-to-mouth buying process would seem to be obvious. But in a world such as that in which we live at the moment it is unavoidable.

It is common knowledge that inventories usually continue to rise for a period of six months or so after sales fall off. That fact was clearly manifest from a Dun & Bradstreet study of the year 1937, when at mid-year there was a rather sharp drop in sales, and inventories kept climbing until the opening of 1938. Happily, we recovered our tempo so that no harm was done, but as we look back to the period 1920-21, we remember that most of our losses seemed to have been due to a relative abundance of inventories, and after all it is unavoidable when there is a sharp drop-off in sales. Supply, temporarily, simply exceeds demand—at least at the old prices.

Fictitious Profits and Losses from Price Changes

It is well that more or less recent tax regulations allow the equivalent of current or replacement cost to sales, that is, the last-in, first-out method. In respect of fields in which cost and price vary a good bit it is desirable for the leveling influence on the profit and loss statement. Neither creditor nor debtor can afford to be deceived by the manifestation of fictitiously high profits during rising price periods with the usual increment of dividends and labor costs; and conversely by the detrimental results of falling price periods, with dismissals, dividend reductions and the possible social unrest which may follow such conditions. Of course in those cases where a rising market has manifested unusually high profits in connection with the

first-in, first-out method, reservation of part of that profit can, and perhaps should, be made to cushion the fall during receding price periods.

The extender of credit should be concerned with the price at which commitments to purchase have been made, and he would expect the accountant to make a notation where, as of the close of a given period, the commitments were relatively high and were well above market price.

In that connection, where the policy of an enterprise is to mark the selling price down promptly on a receding market but to move much more slowly in the converse situation, we are likely to have an enterprise which is giving its leading customers the benefit of prices at the old scale on a rising market and the benefit promptly of reduction on a falling one. Such a process, if continued, would seem to involve "heads you win, tails I lose," and if the policy is continuous, the undertaking may find itself on excessively thin ice, and the creditor, who is participating, in similar condition.

Relative Size of Inventory

A further consideration for the creditor is the size of the inventory in relationship to sales, having reference to the more or less recent history of the company. If they are over-extending themselves that would show up in connection with a comparison of their past statements, and it would seem that if a debtor is intending to increase inventory rather notably and unusually, he should take the extender of credit into consideration and explain the reasons why he is doing it. That would seem to be but fair.

In relying in part upon an inventory to support the loan or credit extension, consideration must of course be given to the character of the goods, that is, its convertibility in case of difficulty. Some materials, when they have entered the manufacturing process, have no convertible value until complete. Other goods on which the conversion operation is rather modest relative to the value of the raw material—which may be of substantial value—permit of a realization on enforced sale of a good bit of original cost. In this connection, one might compare flowers for ladies' hats with lead or copper products.

Then, too, there are industries and types of business which, despite all the leveling influences of the past, are, and must be, highly seasonal—toys for the Christmas trade, for example. An accumulation

of inventory to meet a certain market which is more or less constant may show at the peak of accumulation a figure far out of line with averages, but that fact need not necessarily be alarming.

Things the Credit Grantor Likes to Know

Despite appearances which now and then lead one to the conclusion that we are on a one-way street as to prices, the grantor of credit cannot afford to extend credit for the purpose of speculation in inventories. In those products which permit of it he likes to know that the hedging process is operative.

Moreover, he likes to think that an undertaking is guided by pretty sound statistical information and economic analysis concerning past and prospective performance of markets and prices; and that the enterprise is using intelligently the advantages to be had from carefully planned and scientifically constructed budgets and perpetual inventory controls.

He likes to look at the inventory and the turnover thereof in relation to the industry or the field in which a requester for credit is operating. With regard to such comparatives he doesn't like to see one company in a field too far out of line with its competitors, for example, with either too small or too large a turnover for the type of business, because the former may be inadequate to carry the enterprise and the latter may lead to relatively high liabilities.

The grantor of bank credit cannot undertake to hold the entire sack. He finds from long experience that he can't do it and that the enterprise must have enough current capital to warrant the assumption that the loan will not become frozen. It is disservice to both parties if that ensues. In that connection, the credit grantor is usually happy if cash and receivables equal current liabilities, leaving the inventory as additional protection.

The banker and credit grantor generally are not so much concerned that the books be adjusted to market as they are to know the facts; e.g., when the market is lower than the cost at which inventory is carried, the banker is usually satisfied with such notational information as will permit him to weigh the point.

Reliance on the Accountant

There are so many complexities about the determination of inventory and its proper valuation over a stretch—having in mind price

fluctuations both of finished goods and raw materials—that bankers and creditors generally must rely upon the accountant, appraiser and operating executive in respect of inventory methods and accounting.

Of course the creditor is happiest when he has the name of a reputable accounting firm whose certified statements over a period manifest that adequate examination has been accomplished, that a reasonable effort has been made to present the facts, and that the success of the undertaking over a stretch warrants participation by way of credit.

A consideration which the banker must keep in mind in respect of inventory is the extent to which obsolete or slow-moving goods encumber the total. He must rely upon the accountant's determination of that point and he should be able to assume from the accountant's certification that such reserve provision or write-off as is necessary has been accomplished in connection therewith.

The banker likes to know from the accountant's certification how the inventory was valued, and he likes to know what the accountant did in connection with inventory audit; to what extent, for example, he tested quantity, extended prices, and calculated values; what was the basis of pricing, and whether in point of fact he was employed to do any inventory audit.

With regard to segregation or classification of inventory the banker likes to know, when the finished goods section is very large, whether it is due to a falling off of sales; and, if a large portion of the inventory consists of goods in process, what would happen with a rather sharp falling off of demand. In this connection, the counterplay of purchase and sales commitments is quite vital.

The banker also likes to see incidental materials and supplies shown separately on the inventory, as they have no particular value outside of the business in question and they often run into considerable money; in many cases they can hardly be regarded as a current asset.

As of the close of any accounting period the banker likes to know if consideration has been given to goods purchased which are in transit. If title has passed, such goods are in effect part of the inventory, and liability provision should be made for them.

Viewpoint on Credit Granting

A keynote of the credit approach expressed by one eminent banker of the past was to the effect that he wanted to know always whether a company was in the right business. That is not particularly an

inventory approach but it bears somewhat upon the question because we know that some industries, at least up to very recently, have shown very marked signs of a slow disappearance or death owing to competition with products of greater public demand. Naturally, the outstanding companies of industries of that kind are likely to be good credit risks, but the credit grantor must be watchful of the competitive burden which a unit of such an industry is likely to have to carry as time proceeds.

Departing for a moment from so-called commercial credit, the advancement of technology just cannot wait until cash savings are adequate to finance it. Rather, the reverse is the process. Volumetric savings are mainly the result of successful financing of technology. That has been the history of our country, and commercial credit as I view it is mainly a derivative of the activity stimulated by the longer-term financing of productive technology. We could debate this point at length but it would be inappropriate here.

A constructive point to be kept in mind is that technological America has been built on private credit more than on any other one mechanism, and perhaps on the basis of longer-term credit in particular. Most of the deposits in banks have been primarily created through that route and they depend on the continuance of the process. The point should be made further in this connection, however, that the successful development and improvement of both plant and current assets is dependent upon sane credit policy. I have no apprehension of the size of debt *per se* so long as it is kept in line with volumetric production and exchange measured, not in dollars, but in units of production and exchange of goods and services.

Influences Bearing on Price

We are making strenuous efforts governmentally and privately to avoid inflation of the type which certain foreign countries experienced in the early '20's when goods and things generally were scarce and during which the replacement cost of inventories rose more rapidly than prices of finished goods, and while there were apparent profits from the process they were of no notable conversion value. Volumetrically, measured by way of utilities rather than currency units, the process was essentially one of liquidation and enforced curtailment; goods just were not being produced to supply the demand adequately, and the spiral of prices continued until the collapse.

In the ebb and flow of prices there are various influences. Technology makes, or should make, its contribution constantly toward lowering costs and sales price, with corresponding benefit to labor; other factors such as increased taxation, accelerated defense, and war are influences which are likely to operate in the other direction. We must, however, rely upon the prevailing influence of technology and organization if, as time goes on, we are to live better.

I should like to express a word of sympathy for the accountant whose job in respect of inventory audit has been getting tougher. That he must have the co-operation of the business manager seems to be axiomatic because, as Ben Franklin once said—and we might apply it to the triumvirate here under consideration—"We either hang together or we hang separately."

CHAIRMAN KLEIN: I think you will observe, from the way we have proceeded here on schedule, that each of our speakers has also attained a high degree of ability in exercising control over their inventory of time.

We are now getting to the part of the session that is informal, that will not be published nor commented upon in any written publication, as we mentioned before. It is open for your comments and inquiries which may be directed to any of our speakers, or to anyone in the audience.

. . . Off-the-record discussion . . .

CHAIRMAN KLEIN: We appreciate the fine co-operation of each of you in your contribution to this splendid discussion. The clock has now moved around to the point where I turn the meeting over to our President, Vic Stempf.

PRESIDENT STEMPF: I am always impressed in every one of our N.A.C.A. Cost Conferences by the fact that here in this Association of ours we have a clearing house where we get three viewpoints, that of the man who has his nose on the grindstone in industrial practice; that of the external accountant; and that of the academic man, the man who considers these things perhaps in a greater degree from the viewpoint of pure theory than either of the other two. I am putting Arthur Schulz in the latter classification; he formerly taught at Columbia. I am positive that when you get those three views

thrown into the hopper and thoroughly discussed, the conclusions will be sound in theory and practicable in operation.

I think that is an element of strength in this great Association of ours. I want to extend to you gentlemen the thanks not only of this audience, but of all the members of the Association for your generous participation this afternoon.

Before we close, I think that we should recognize the splendid service which our Convention Technical Program Committee has rendered this year, that group comprising Nelson L. McCully as Chairman, of Chicago; Arthur C. Chubbuck, of Boston; Frank Klein, of New York; and Donald M. Russell, of Detroit.

I think that we should have a rising vote of thanks and appreciation extended to those men for the splendid work which they have done.

. . . The audience arose and applauded . . .

PRESIDENT STEMPF: We always hate to see these conventions end. I would like to remind you of the little remark that I made in the editorial relating particularly to this session, that we felt sure that you men would come out to this meeting in spite of the immediate demand of each of your businesses, because it is, in fact, the pause that refreshes. I am sure that every man who has attended this convention, who has partaken of the sessions, will go back to his own business better informed and with a clearer mind—far better able to cope with some of those problems that he left behind him when he came here.

The hour has come when we must declare this Twenty-Second International Cost Conference at a close. We do so with regret, but we merely say *au revoir*, because we hope to see most of you again in Chicago next year.

. . . The meeting adjourned at four-forty o'clock . . .

